TECHNOLOGY DEPT.

A National Newspaper for Every Branch of the Industry

Automotive Daily News

CARS · SHOP EQUIPMENT · TRUCKS · AVIATION · PARTS · ACCESSORIES · TIRES

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Ross Will Offer Improved Cam and Lever Steering

INDIANAPOLIS, Ind., Sept. 5.—An improvement in the Ross cam and lever steering gear, claimed to be the greatest advance since the introduction of the cam-and-lever type several years ago, is soon to be announced by the Ross Gear and Tool Company of Lafayette, it has been learned from authoritative sources here.

Efficiency ratings from 64 to 79 per cent., with still further increase probable in the maximum figure, is said by Ross engineers to have been developed in this improved product, to be known as the Ross "roller mounted" cam and lever steering gear. This compares, it is understood, with 52 to 54 per cent. efficiency in steering gears developed up to this time, and provides an actual increase of 23 to 40 per cent. in ease of steering as compared with the most efficient gear now available.

A remarkable reduction in friction between the cam and the lever of the gear is said to have been accomplished by mounting on tapered bearings the lever stud through which steering effort is transmitted from the cam to the lever. The stud formerly maintained a sliding contact with the cam. It is said no departure has been made from the original cam and lever pirnciple, and that the gear retains the greater leverage, lower internal pressures, "road sense" and control of road shock for which the Ross cam and lever gear has been known.

Wear so slight as to be scarcely measureable was shown in the improved gear after long periods of testing under heavy loads at the Ross plant, those aiding in its development said. A load of 900 pounds, practically double the maximum requirements ever encountered in actual driving, was used in the tests, it is said. Gear experts claim the load under ordinary driving conditions at a fair rate of speed seldom exceeds fifty pounds and probably never goes above 500 pounds even in the most exacting instances, such as parking.

Although no formal announcement has yet been made of the great step about to be taken by Ross, word from the factory is that the roller-mounted gear is entering production, and that shipments will be made to some customers very soon. Samples of the roller-mounted gear will also be supplied to the trade within the near future, it is understood.

The Ross Gear and Tool Company has just completed its greatest six-month period in its history, its earnings from January 1 to July 1 amounting to $436,336.20, as compared to $373,961.93 for the first six months of 1928. This is at the rate of $5.82 a share, and is responsible for the Ross stock dividend having been recently increased to $3 from $1.80 a share. Schedules for the second six months of this year indicate a marked increase in volume of business for this period.

New Cord Cars Draw Huge Crowds to N. Y. Dealers' Showrooms

New York, Sept. 5.—More than 250,000 persons visited the fifty Auburn dealers' showrooms in metropolitan New York to view the new Cord front drive automobile in the first two days of its showing, according to compiled reports of A. R. Gribben, vice-president and general manager of the New York Auburn Sales Company, distributor.

Dealers report that in many instances they were unable to handle the crowds and in most of the fifty showrooms the crowds were so great that at times lines were formed in the streets waiting to get in.

A. R. GRIBBEN

One downtown Auburn dealer signed forty-three orders for Cord cars on the opening day.

MOHAWK RUBBER REPORTS $283,945 NET FOR 6 MONTHS

New York, Sept. 5.—The Mohawk Rubber Company reports for six months ended June 30, 1929, profit of $283,945 after interest and depreciation, but before Federal taxes, comparing with $296,464 in first six months of 1928.

Budd to Visit European Plants

MR. AND MRS. EDWARD G. BUDD and their daughter, Mary, photographed on board the Mauretania Wednesday night, as they left New York for Europe. Mr. Budd, who is president of the Edward G. Budd Manufacturing Company and the Budd Wheel Company of Philadelphia and Detroit, will devote some time to the affairs of his associate companies in England, France and Germany.

Ford Proposes to Convert Detroit's Garbage Into Grease

Detroit, Sept. 5. — Depriving earthworms of a dainty dish, Henry Ford plans to gather Detroits' grime and garbage and grind it into grease. This was revealed by Mayor Clyde Ford of Dearborn, who plans to get into touch with Detroit officials to discuss Henry Ford's offer.

According to the plan Henry Ford will build a plant which will eat up all the garbage. This plant would convert the present waste from the automobile centers into greases, fertilizers and other by-products.

The garbage would be hauled to the Ford converters in specially constructed cars and the city would pay no part of the converting costs. The proposal would mean a saving of several million dollars to Detroit and neighboring cities, as it is estimated that Detroit alone spends $2,000,000 for the collection and destruction of garbage and refuse. Ford is at present operating similar converting plants in London.

CITIES SERVICE BUYS TWO ADDITIONAL CHAINS

New York, Sept. 5.—The Cities Service Company has acquired two chains of gasoline filling stations in Michigan operating 141 owned and leased service stations and twenty-six bulk stations serving several hundred dealers.

The larger chain is that of the Mutual Oil Company of Adrian, which operates 116 service stations and twenty-five bulk stations in the south central part of Michigan. The other chain is that of the Grimes-Madigan Company of Grand Rapids, operating twenty-three service stations and one bulk plant, all in Grand Rapids.

PINES WINTERFRONT SIGNS NEW LARGE CONTRACT

Chicago, Sept. 5.—A new contract has been received by the Pines Winterfront Company from a large automobile manufacturer for automatic radiator shutters for the entire output of one of its cars in 1930, with delivery starting October 1, according to James P. Raleigh, president.

This is in addition to another large order that was received several days ago, which called for 1,000 shutters daily for the next year.

FRANK B. AMOS LEAVES FOR TOUR OF EUROPE

New York, Sept. 5.—In line with the established policy of the organization to keep in touch with foreign markets and its foreign representatives, Frank B. Amos, director of the overseas advertising division of George Harrison Phelps, Inc., Detroit, sailed yesterday for Plymouth, England. After spending a few days in the London offices, he will spend two months visiting units of the organization and affiliated agencies in the larger centers of population on the British Isles and on the Continent.

F. B. Amos

During the twenty-five years Mr. Amos has followed the advertising profession he has been in touch with almost every phase of merchandizing in the United States and foreign countries. He has circled the globe three times in the last five years.

Mrs. Amos is accompanying her husband, and they plan to be back in the United States before Christmas.

J. C. HAARTZ COMPANY SOLD TO DETROIT MAN

New Haven, Conn., Sept. 5.—The J. C. Haartz Company of this city announces that it has sold its entire business to L. H. Green of the Automotive Materials Corporation of Detroit. The details of transfer of assets, etc., are now being effected. No change in policies or management is contemplated. The Haartz company is manufacturer of Duro Gloss, automobile top fabrics and finish.

AUBURN'S OUTPUT MAKES BIG GAINS; HUDSON-ESSEX UP

Stutz Also Reports Increased Production In August

NEW YORK, Sept. 5.—Additional reports of August automobile production, received today, bore out the earlier indications that the output of the higher priced cars continued at a higher rate in relation to the July totals than the rest of the industry.

AUBURN

Auburn Automobile Company reported the shipment of 2,161 Auburn and 348 Cord cars last month, a total of 2,509, comparing with 1,105 Auburns in August, 1928, and 2,026 in July, 1929. This brought the total for the first eight months of 1929 to 19,190, a gain of 8,960 over the 10,230 cars shipped in the corresponding period of last year. The September schedule of this company calls for 2,400 Auburns and 1,500 of the new front-drive Cords.

HUDSON-ESSEX

Shipments of Hudson and Essex cars in August totaled 17,322, as compared with 46,972 in August, 1928, and 23,707 in July, 1929. Shipments in eight months to September 1 this year were 267,341, against 230,019 in like period of 1928, gain of 16.2 per cent. This is the best eight months period Hudson has ever known, leaving less than 15,000 Hudson and Essex cars to equal the shipping record of 282,204 for entire year 1928.

To assure a steady seasonal reduction of car stocks in the hands of distributors, Hudson is shipping at the rate of around 85 per cent. of present retail sales, as reported weekly to the factory by distributors and dealers. On this basis August shipments were 17,309.

STUTZ

August shipments of the Stutz Motor Car Company showed the month to have been one of the greatest in the company's long existence. Domestic shipments during the month were 50 per cent. greater than during July and 78 per cent. more than in August last year. Notwithstanding the fact the Stutz has always exported an extraordinarily large percentage of its output, overseas shipments for the month were the largest the company has ever known, a gain of 235 per cent. over the preceding month being chalked up in deliveries to foreign markets. Export shipments were also 68 per cent. greater than in August, 1928.

HOOD RUBBER PREFERRED CALLED FOR NOVEMBER 1

Boston, Mass., Sept. 5.—All outstanding preference and preferred stocks of the Hood Rubber Company have been called for retirement on November 1, at $107.50 and $115 respectively, with accrued dividends.

Oregon Makes Sweeping Changes in Motor Laws

Salem, Ore., Sept. 5. — Announcement has been made this month of sweeping changes in Oregon's automobile license laws by Hal E. Hoss, secretary of state, who has been charged with the responsibility of informing 250,000 automobile owners here of an entirely new auto license law, effective January 1, 1930.

Salient changes in the new law include:—

1. Changing the date for licensing cars from January 1 of each year to July 1 of each year.

2. Reducing the license fees on cars approximately 25 per cent.

3. Providing that licenses may be purchased for one year, three-quarters, one-half and one-fourth of a year instead of for one year or one-half year as the law now provides.

Under the new schedules adopted for Oregon cars weighing 1,700 pounds or less will pay a license fee of $10 annually. For cars weighing over 1,700 pounds and less than 3,000 pounds the license fee will be 90 cents for each 100 pounds or fraction thereof. Cars weighing over 3,000 pounds and less than 4,500 pounds will be a license fee of $1 for every 100 pounds or fraction thereof. Cars weighing over 4,500 pounds must bear a license fee of $1.10 for every 100 pounds or fraction thereof.

Motor trucks, trailers or semi-

(Continued on Page 2)

August Automobile Production by Companies

	Aug., 1929.	Aug., 1928.	July, 1929.	8 Months 1929.	8 Months. 1928.	Gain or Loss for 8 M'ths.
Aub'rn-Cord	2,509	1,105	2,026	19,190	10,230	+ 8,960
Buick-Marq.	28,971	27,476	26,279	134,094	128,476	+ 5,618
Chevrolet	109,968	122,702	137,831	1,093,906	994,244	+ 99,622
Ford	285,634	†	196,505	1,470,388	†	† ..
Franklin	1,150	775	1,325	11,200	5,325	+ 5,875
Gra'am-Paige	6,576	4,800	†	65,926	58,777	+ 7,149
Hud'n-Essex	17,322	46,972	23,707	267,341	230,019	+ 37,322
Hupp	5,255	7,022	2,496	33,390	50,456	— 17,066
Nash	3,624	22,525	6,672	*90,568	*92,146	— 1,586
Packard	5,336	5,001	3,500	36,075	†	..

†Not available.
*First nine months of fiscal year.

1929

XUM

Code of Marketing Ethics Expected to Aid Oil Trade

Chicago, Sept. 5.—Leading oil distributors and men in the petroleum industry in the central West are of the opinion that the placing in effect August 31 of the trade's code of marketing ethics will be productive of much good.

It will mean the correction of evils of too keen an unethical competitive marketing prices. The trade had been well prepared for the code by educational efforts of the American Petroleum Institute, which sponsored it from the beginning, and received approval for it from the Federal Trade Commission.

Enforcement of the code will be principally by "moral suasion," according to W. R. Boyd, Jr., executive vice-president of the institute. Committee machinery for supervision of the code in operation has been at work for weeks. Generally, it is believed, the adoption of the code will drive the "gyp" dealer from the roadside.

The code calls for discontinuance of loaning and leasing of gasoline and station equipment unless cost of installation is paid by lessee. Another rule prohibits lease and license agreements whereby a company rents to a third party a station or site at a cost lower than it is paying for use of the property.

Other rules ban attempts to break existing written contracts for sale of petroleum products, require conspicuous display of the name or trade marke of owner or lessor on all equipment used in handling its products and bar the use of such equipment in handling products of other firms. Lotteries, prizes and games of chance are not to be used in connection with sale of oil products. Selling below cost to injure a competitor or lessen competition is branded an unfair trade practice. All these rules are enforceable in interstate commerce under the Clayton and Federal Trade Commission acts.

Oregon Makes Sweeping Changes in Motor Laws

(Continued from Page 1)

trailers equipped with one or more solid tires must pay a license fee 50 per cent. higher than the normal scale.

Due to the transition in 1930 from the January 1 basis to the July 1 basis for the payment of fees, owners will be required to pay for a six months' temporary license January 1, 1930, and this will be attached to their 1929 plates. On or before July 1, 1930, owners will be required to purchase a full year's license.

After September 30, 1930, registration fees will be reduced 25 per cent.; after December 31, 1930, fees will be cut 50 per cent.; after March 31, fees will be reduced 75 per cent.

To make up the reduction in state revenues brought about by the license reduction of 25 per cent., the Oregon Legislature provided that an additional gasoline tax of 1 cent would be added to all sales after January 1, 1930. This brings the gasoline tax to 4 cents a gallon in Oregon.

FORD OF GERMANY AND FRANCE ON MARKET HERE

New York, Sept. 5.—Shares of the Ford Motor Company of France went on the New York Curb Exchange for trading today. The Ford interests control 60 per cent. of the stock, the remaining 40 per cent. having been listed on the Paris Bourse some time ago.

Manufacturers & Distributors NOTICE—

Experienced sales executive and branch manager desires connection with automobile manufacturer or distributor, in position where an 18 years' successful record will be of value.

Will go any place where an opportunity and a future are assured to the right man. References from high grade manufacturers available. Box 232, Automotive Daily News, Graybar Bldg., New York.

Gasoline Consumption Reaches New July Peak

Special from A. D. N. Washington Bureau

Washington, Sept. 5.—Consumption of gasoline reached a new peak in July, the daily average indicating domestic demand of 1,189,000 barrels, being an increase over July, 1928, of 13 per cent., it was disclosed today by the petroleum division of the United States Bureau of Mines.

Production again rose to a new peak in July, when the daily average was 1,221,000 barrels, as compared with 1,187,000 in June. The July figure represents in increase over the previous year of 15 per cent.

At the current rate of total demand, there appears a supply of twenty-seven days, as compared with thirty-two days' supply on hand in June and twenty-five days' supply on hand a year ago.

Crude petroleum production in the United States broke all monthly records in July, reaching a total of 91,327,000 barrels, a daily average of 2,946,000 barrels, and exceeding the 90,000,000-barrel mark for the first time, the Bureau of Mines, Commerce Department, reported today.

DAILY AVERAGE CRUDE OIL PRODUCTION GAINS

New York, Sept. 5.—The American Petroleum Institute estimates that the daily average gross crude production in the United States for the week ended August 31, 1929, was 2,973,450 barrels, as compared with 2,966,350 barrels for the preceding week, an increase of 7,100 barrels. The daily average production east of California was 2,098,550 barrels, as compared with 2,078,450 barrels, an increase of 20,100 barrels.

Imports of petroleum (crude and refined oils) at the principal United States ports for the week ended August 31 totaled 1,959,000 barrels, a daily average of 279,857 barrels, compared with 1,555,000 barrels, a daily average of 222,143 barrels for the week ended August 24, and a daily average of 253,500 barrels for the four weeks ended August 31.

HAYES BODY APPROVES OFFERING OF NEW STOCK

Detroit, Sept. 5.—The stockholders of the Hayes Body Corporation at a special meeting yesterday approved the directors' proposal to offer rights to subscribe to additional common in ratio of noe new share, $20, to every five shares held. Stock not subscribed by stockholders will be underwritten by an Eastern syndicate.

Getz Sails to Make G. M. Publicity Survey Of Far East Region

New York, Sept. 5.—In line with the plans of the General Motors Corporation to keep in close touch with the people of the Far East, Carl H. Getz, supervisor of publicity for the General Motors Export Company, will sail from San Francisco on the President Adams tomorrow, bound for Singapore. Mr. Getz will be accompanied by his wife.

During his stay in the Far East Mr. Getz will make a complete study of publicity and advertising situation in that region in order to keep the work of his department at its greatest efficiency.

Other departures and arrivals of members of the General Motors Export Company staff include:

E. T. Klee, works manager, General Motors G. m. b. H., Berlin, who has been on a vacation and visit to the home office, sailed for Germany August 27 on the Resolute.

C. J. Sheeran, parts manager of the Sydney branch of General Motors Australia, who has been on a vacation and visit to the home office, sailed for Sydney from San Francisco August 29 on the Ventura. Mr. Sheeran was accompanied by his family.

G. C. Goodell, parts manager of the Melbourne branch of General Motors Australia, sailed for Melbourne from San Francisco August 29 on Ventura. He was accompanied by his family.

R. A. May, former assistant managing director of General Motors Japan, arrived in New York August 25 for a vacation and new assignment.

W. T. Lutz, general treasurer of General Motors Australia, who has been on a vacation and visit to the home office, sailed for Melbourne from San Francisco yesterday on the Maunganui. Mrs. Lutz will accompany Mr. Lutz.

H. B. Phillips, regional director for the Far Eastern operations of the General Motors Export Division, will sail for London September 7 on the New York. After spending several weeks visiting the European operations, Mr. Phillips will sail for Singapore on the Christiaan Huygens.

C. R. Evans of the general sales department of the General Motors Export Division arrived from Europe on the Leviathan on September 2.

W. F. Breuer, Fisher body service representative, sailed August 29 on the President Harrison for Panama. After visiting the General Motors Export Division operations at Argentina, Brazil and Uruguay, Mr. Breuer will go to General Motors South Africa, Port Elizabeth, before returning to New York.

A. G. Williams of the service department will sail for Osaka on September 7 on the President Grant from Seattle, where he will take up new duties at General Motors Japan.

E. J. Duggan of the supply department will sail for Sao Paulo September 7 on the Pan-American to assume new duties as assistant to the managing director of General Motors Brazil.

CALENDAR OF COMING EVENTS

SEPTEMBER

7-15—**Chicago, Ill.** International Aircraft Exhibition.
9-13—**Cleveland, O.** American Society for Steel Treating. Eleventh Annual Convention.
9-12—**Cleveland, O.** American Welding Society. National Fall Meeting.
9-12—**Cleveland, O.** Institute of Metals Division, American Institute of Mining and Metallurgical Engineers. National fall meeting.
9-12—**Cleveland, O.** Iron and Steel Division, American Institute of Mining and Metallurgical Engineers. National fall meeting.
9-13—**Cleveland, O.** National Metal Exposition at Public Auditorium.
9-13—**Cleveland, O.** First Annual Metal Congress.
11-13—**Cleveland, O.** Iron and Steel Division, American Society of Mechanical Engineers. National fall meeting.
15-21—**Springfield, Mass.** Eastern States Exposition.
28-Oct. 4—**Atlantic City, N. J.** American Electric Railway Association Convention.
30-Oct. 4—**Cleveland, O.** National Machine Tool Builders' Association Convention.
30-Oct. 4—**Chicago, Ill.** National Safety Congress.

OCTOBER

2- 4—**Cleveland, O.** Society of Automotive Engineers' Production meeting.
3-13—**Paris, France.** Automobile show.
7- 8—**Erie, Pa.** Pennsylvania Automobile Association ninth annual convention.
7-11—**Washington, D. C.** Permanent International Association of Road Congress, sixth session.
12—**Tulsa, Okla.** Oklahoma Tire Dealers' Association meeting.
16-18—**Detroit, Mich.** Society of Industrial Engineers Convention.
17-26—**London, Eng.** Automobile show.
23-25—**Cleveland, O.** Society of Industrial Engineers, sixteenth annual meeting at Hotel Statler.
23-30—**Prague, Czecho-Slovakia.** Automobile show.
24-26—**Philadelphia, Pa.** American Gear Manufacturers' Convention.
28-Nov. 22—**Tokio, Japan.** World Engineering Congress.
—**Sioux City, Ia.** Automobile Merchants' Association Convention.

NOVEMBER

4-9—**Chicago.** Motor & Equipment Association Annual Business Exhibit.
6- 8—**Detroit, Mich.** National Automotive Parts Association Convention.
7-16—**London, Eng.** Truck show.
9-16—**Chicago, Ill.** Automobile Salon at Hotel Drake.
11-14—**Chicago, Ill.** National Tire Dealers Association Convention and Trade Exhibition at Sherman Hotel.
11-16—**Detroit, Mich.** National Standard Parts Association Show and Convention.
12-15—**Toronto, Canada.** Society of Automotive Engineers' Transportation Meeting.
14-24—**Paris, France.** Truck show.

DECEMBER

1- 7—**New York.** Automobile Salon at Hotel Commodore.

JANUARY

4-11—**New York.** National Automobile Show.
6- —**New York.** National Automobile Dealers' Association Convention.
9- —**New York.** Society of Automotive Engineers' Annual Dinner.
11-18—**Atlantic City, N. J.** American Roadbuilders' Association Convention.
11-18—**Newark, N. J.** Automobile Trade Association Annual Show.
21-24—**Detroit, Mich.** Society of Automotive Engineers' Annual Meeting.
25-Feb. 1—**Chicago, Ill.** National Automobile Show.
25-Feb. 1—**Cleveland, O.** Show at Public Auditorium, auspices of Cleveland Automobile Manufacturers and Dealers' Association.
27-28—**Chicago, Ill.** National Automobile Dealers' Association Convention.
30-31—**Cleveland, O.** Association of Commercial Haulers' convention, Cleveland Public Auditorium.

SPARKS from DETROIT

Miles Per Gallon

* * *

Southern Outlook Good

* * *

Poag, the Farmer

Fred Kingsbury—Detroit Editor

JOHN G. WOOD, director of engineering at the Oldsmobile-Viking factories in Lansing, Mich., has been deeply interested in gasoline mileage for many years. He has made a deep study of the subject and has reached a decision that gasoline mileage depends largely on the driver of the vehicle.

Mr. Wood says that two automobiles of the same make, tuned to deliver exactly the same gasoline mileage at the same speed under the same driving conditions were run over an eighteen-mile stretch of comparatively level road in exactly the same elapsed time.

While both cars started side by side and ended the run at exactly the same time they were driven under widely varying conditions which definitely proved that human element and driving habit are the governing factors in gasoline mileage.

* * *

HARRY J. SHORTER, assistant general sales manager of Durant Motors, is back in Detroit after a two weeks' trip through the South.

"Cotton crops are excellent," he says, "and the yield of tobacco in southern Georgia and other tobacco producing districts in the South is the best in years."

* * *

E. P. CHALFANT, executive vice-president of the National Standard Parts Association, is greatly pleased with the showing made in the automobile parts and airplane parts business during the year.

Along with increased sale in automobiles has come great gains in the parts business in all sections of the country. His organization also has gone into the airplane parts business after a great deal of investigating covering a considerable period of time. Mr. Chalfant said today that he expects the fall months to surpass any like period in the history of the parts business in this country.

* * *

Friends of E. J. Poag, who has turned farmer while at the same time he looks after the sales, sales promotion and advertising of the Buick Motor Company of Flint, Mich., are anxious to know what kind of season he has had in the agricultural industry. They know what he has been doing with Buick, where he is one of the busiest men in the organization. But they have not yet had a report of his farm activities. They expect it will be forthcoming soon.

* * *

Detroit section of the Society of Automotive Engineers expects to have a very busy fall and winter season. There are so many new things developing in the automobile business and especially in engineering practices, that the section will be more active than ever before, according to B. J. Lemon, chairman.

* * *

THERE are many motorists who have received tickets for speeding and but very few have ever been reprimanded for going too slow. However, that is just what is going to happen in five Wider Woodward cities between Detroit and Pontiac beginning Sunday. Slow-moving vehicles must keep out of the fast travel zones or the drivers will be arrested.

Officers of these five municipalities have been busy warning motorists all the week and beginning Sunday, drivers going from ten to twenty miles an hour in the traffic lanes designated for thirty-five miles an hour will receive tickets.

This procedure is being followed to spur traffic and to do away for all time with "road hogs," who are a great menace to the safety of motorists.

* * *

Despite the fact that more motor cars are going on the streets of Detroit, traffic conditions are gradually improving. Reports for the month of August show that thirty-seven persons were killed in thirty-five traffic accidents during the month and a total of 1,935 persons were injured. In August, 1928, there were thirty-eight persons killed. In the reports on the thirty-seven fatalities, nineteen drivers and sixteen pedestrians were blamed.

Latest Engineering News of the Industry

Noblitt-Sparks Adds New Arvin Heaters

NEW hot-water heaters have been added to the line of Arvin car heaters this year by Noblitt-Sparks Industries, Inc., of Indianapolis. The new models, made in sizes to fit all cars, round out the Arvin line of hot water, manifold, zipper and exhaust type heaters.

Three sizes are offered: No. 80 Standard for large cars, No. 70 Junior for medium and small cars (except Ford model A) and No. 60 for model A Ford cars exclusively. All models have individually adjustable deflector blades, which may be moved to direct heat to right or left. This unit may be fitted horizontally, if desired, to direct the heat up or down.

The heater is connected with the hot water circuit of the motor. Hot water circulates through the radiator core, and the heated air is fan-forced into the car. The radiator core is incased in an attractive housing, which is chromium plated in the No. 80 and nickel plated in the Nos. 70 and 60.

Heat is regulated by starting or stopping the fan. This is controlled from a switch on the instrument board. The shut-off valve in the intake water connection completely shuts off the water in warm weather when heat is not desired. By operating the fan alone, with the water shut off, the Arvin becomes an effective summer ventilator.

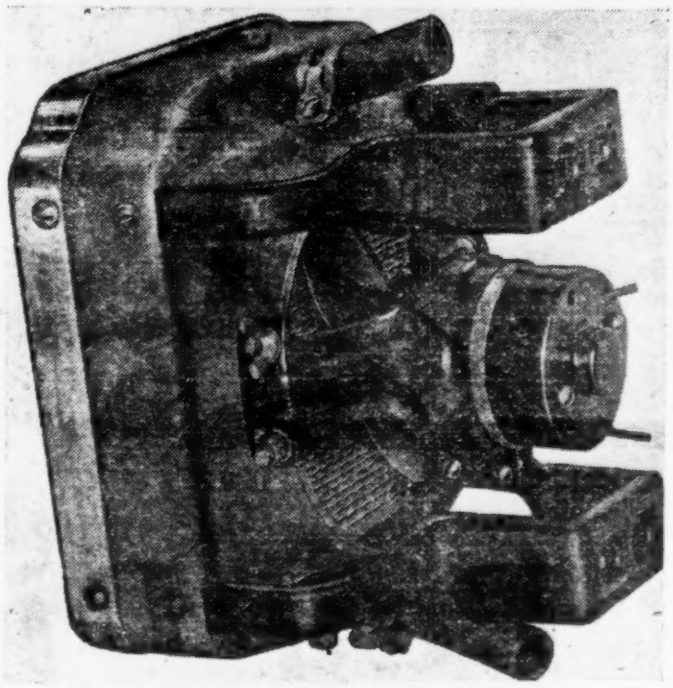
Water lines are of special oil-resisting and heat-resisting rubber hose. Reinforced mounting brackets hold the heater rigid and vibrationless on the dash. These brackets are entirely independent of the water lines, which are left free and without strain.

The fan (6 vclt. 2½ amp., 1,750 r. p. m.) has airplane propeller type blades. It runs on self-aligning bronze bearings and uses about as much current as a parking light. The Arvin requires no attention, save oiling the fan motor once or twice each season. Removable mounting brackets make the fan motor easily accessible.

No. 80 and No. 70 Arvins are alike in every respect but size. The No. 60 is supplied with special brackets and fittings for installation on model A Ford cars only. Special inlet and outlet water connection castings are furnished with the No. 60, ready for heater hose connection. No drilling or tapping is necessary. The outlet casting is equipped with a thermostat, which brings the water to 160 degrees heat before entering the cooling system.

The Arvin Hot Water Heater is shipped complete with all fittings, so that installation can be made on any car with minimum tapping or alteration. Fittings are of non-corrosive brass, made leakproof by compression collar joints. Installation is simple, and the heater may be easily removed for use on another car.

Among other heaters of the Arvin line is the zipper type. Two models fit practically all cars. A flexible tube or divided steel jacket incloses the hottest portion of the exhaust pipe. Incoming air is warmed and forced up through a register, which may be located in either front or rear compartment.



REAR VIEW of Arvin Hot Water Heater, showing fan, one-piece housing and sturdy mounting brackets, which are entirely free from the water lines. Note also, the removable fan motor bracket, which permits easy access for oiling.

Heil Co. Develops New High Lift Unit

THE HEIL COMPANY has recently developed a high-lift unit which offers unusual facilities to the haulers of ready mixed concrete. A newly designed linkage, which is claimed to be both light and strong, lifts the body load of concrete to a ground clearance height of 8 feet 2 inches, and also places the body at a 35-degree dumping angle, which permits chute facilities to a point up to 15 or 20 feet from the truck.

The makers state that their hydraulic hoist pistons, pushing against the load at all angles of the raising and dumping operation, will raise the loaded body in twenty-eight or thirty seconds, depending on the speed of the motor. If it is advisable to use a direct dump, a slide bar permits the lower linkage rollers to by-pass the channel supporting frame. The hoist then raises the body to a full 55-degree dumping angle.

SPARK PLUG ENGINEER SPEAKS ABOUT OIL

THE following interesting observations were made by C. W. McKinley, research engineer of the AC Spark Plug Company, in making oil filter road tests recently:—

Do you know that oil consumption while driving at fifty to sixty-five miles an hour is more than twice the amount consumed at thirty miles an hour?

That an automobile running at average speed pumps from 150 to 200 gallons of oil hourly?

That the oil in the crank case is completely circulated through the engine's oiling system from 100 to 150 times every hour?

That the content of crank case is pumped through the oil filter ten to fifteen times an hour?

Brandt Announces Annealing Furnace

AN annealing furnace, for which unusual qualities are claimed, has recently been announced by the Brandt Engineering Corporation. The manufacturers state that because of the construction of this furnace it is possible to do better annealing at less cost. It is also stated that with this equipment soldering can be put upon a mass production basis and that higher grades of nickel silver can be used without production penalties.

The principal basis for the claims is that annealing is done under conditions that are said to make oxidizing or scale impossible. Also the cooling of the work after annealing is done under controlled conditions. Bright dipping is eliminated with this unit, with the consequent possibility of cutting out such things as acid tanks, acid fumes, etc. The makers make the following claims:—

"The Brandt furnace does not depend upon water screens, flame shields, oil baths, mechanically operated doors, or any other troublesome or complicated mechanical devices.

"The heating of parts in process is carried on under conditions which make it impossible for them to oxidize, and they come from the furnace cool.

"Production in the Brandt furnace is continuous. When a tray loaded with parts is put into the furnace, it is not necessary to wait until it is finished before putting others in, but rather the trays follow through in succession, so that the Brandt furnace makes annealing, soldering or other heat treatment a continuous production, straight-line operation.

"Patent applications have been made covering all the basic features of the Brandt furnace."

EMERGENCY GAS PUMP FOR AIRPLANE USAGE

SPRINGFIELD, MASS., Sept. 5.—Gilbert & Barker are producing a small gasoline pump, made to be carried in an airplane for emergency use, when landing on fields where no pumps are installed. It is made of aluminum, weighs about ten pounds, is 8 by 5 inches in dimensions and is 18 inches high and can be tucked away in a small space. From eight to ten gallons a minute can be pumped by this device.

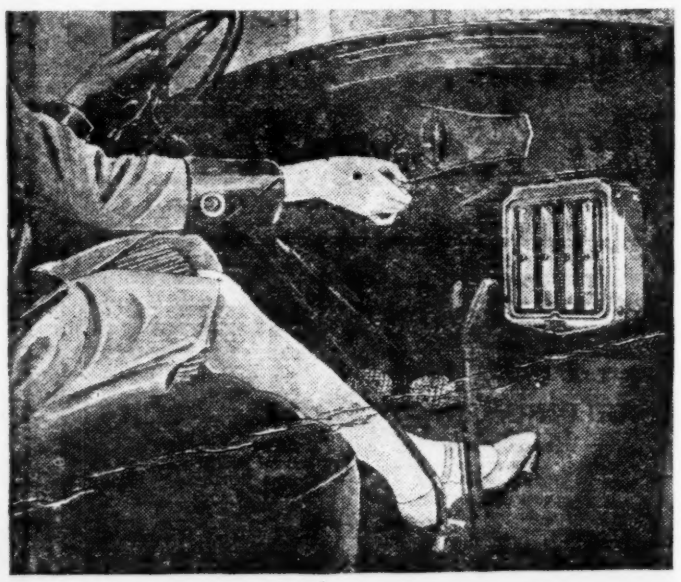
BRANDT FURNACE, which is claimed to anneal without scale or oxidizing.

G. E. IS NOW MAKING LARGE DIAMETER CABLE

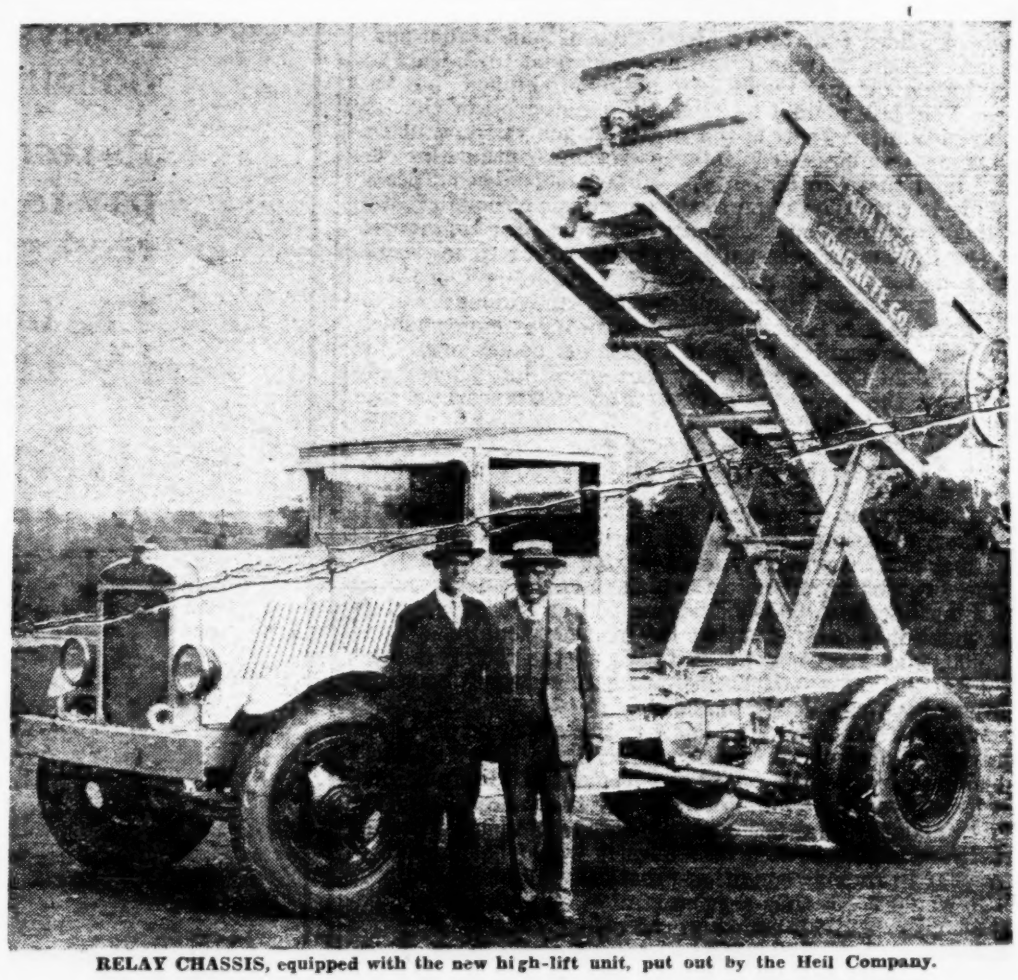
POWER and control cable, with interlocked, flexible metal armor for installation without a conduit in central station, industrial and other interior wiring, has been announced by the General Electric Company. Cable provided with the armor can be run along walls, between partitions and under floors without the use of ducts, and the construction of the armor is such that turns in the cable can be made easily.

Varnished cambric and rubber-insulated, either taped, braided or leaded, and paper-leaded cable can be supplied with the armor in lengths up to 1,000 feet for cables with an overall diameter less than one inch and in lengths up to 2,000 feet for cables with an overall diameter between one and three inches. The cables can have any number and combination of conductors and any outside diameter up to three inches.

The armor is a layer of overlapping and interlocking metal tape, either galvanized steel or aluminum, so applied that the cable is always mechanically protected under reasonable installation conditions. The steel armor is suitable for most installations; the aluminum tape is for use where a non-corroding armor is required and for single conductor cable carrying alternating current where the magnetic effect of steel is undesirable.



TYPICAL INSTALLATION view of Arvin Hot Water Heater, showing how the Arvin fits on the dash, up under the instrument board and out of the way, leaving ample leg room. Note push-pull switch on the instrument board.



RELAY CHASSIS, equipped with the new high-lift unit, put out by the Heil Company.

Automotive Daily News

"Of, By and For the Entire Automotive Industry"

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AUTOMOTIVE DAILY NEWS PUBLISHING CORPORATION,
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Accessory Profits

THERE is not the slightest question that the year 1929 will go down into history as the greatest period that the accessory industry ever has known. The vehicle manufacturers have hung up all time production records month after month, yet the increased output has not brought all of them proportionally as much profit as the accessory manufacturers have enjoyed.

The answer is easy. In the vehicle making field the greatly increased production has been the result largely of increased Ford output. Other manfacturers have maintained conservative schedules, running slightly above those of last year. On the other hand, the accessory industry has profited not only by other manufacturers' production but by the Ford output of new cars as well.

In a recent issue of Automotive Daily News we find a compilation of earnings by a group of twenty-four leading accessory and parts makers and the figures show an increase in earnings over the same six months' period of 1928 of 45 per cent. The accessory and parts business as a whole will probably show an increase of more than 30 per cent. on the activities for the entire year of 1929. Certainly prosperity has perched on the banners of the parts industry.

Gas Taxes and Income

DURING the present session of Congress there will probably be offered legislation making it legal for motor vehicle owners in all states to deduct the amounts paid into state treasuries in the form of motor fuel taxes from their national income tax returns. The Internal Revenue Bureau has just ruled that vehicle owners in Missouri may do this because of the peculiar wording of the Missouri law. This statute provides that every distributor of motor fuel shall pay into the state treasury an amount equal to 2 cents on every gallon of fuel manufactured in or shipped into the state. This law plainly looks to the passing on of the tax to the consumer, whereas the ordinary gas tax law places the tax on retailers. The internal revenue authorities evidently hold that the latter type of law embodies no direct mandate to pass the tax on to the consumer, although it was practically always done. At any rate it was for this reason that the Bureau of Internal Revenue has refused to permit deductions for gas tax payments from Federal returns.

This may seem like a small matter individually, but in the aggregate it is important. Big operators of motor vehicle fleets will be enabled to make important deductions. For the individual the amount my seem small, but almost any relief from the growing oppression of fuel taxes is a step in the right direction.

Replacement Education

IN a catalogue recently issued by a well-known parts maker, attention is called to the fact that the replacement market for pistons should be far greater than it is. At the present time motor vehicle owners are spending something like $38,000,000 for new pistons. The manufacturer mentioned estimates that the market should be around $114,000,000. He bases his estimate on the fact that most cars after 25,000 or 30,000 miles of service would be vastly improved by a new set of pistons.

Without attempting to analyze the exact needs of the average car for piston replacement, there is no question that almost any vehicle needs replacement of vital parts before it is given that luxury. Most of the wear in any car falls on about 5 or 6 per cent. of the mechanism. If worn parts were replaced with new ones it would be possible to keep a car in factory condition practically all of its life.

It would seem that service station operators could advantageously begin a campaign of owner education in this important matter of timely replacement of the parts of the mechanism that absorb the greater part of the wear.

Pay Dirt!

That's what circulation is.

Some of it assays mighty high and some—not so good.

Who wouldn't rather pick up nuggets than pan for results?

When it comes to Quality in circulation

Automotive Daily News

Assays Extremely High—Exceptionally So!

Its readers are able and willing to pay for the daily news service it renders.

The biggest people in the industry, 11,000 strong,

Really Read It

Automotive Daily News

H. A. TARANTOUS, *Bus. Mgr.*

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Geo. M. Slocum, Mgr.
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Detroit, Mich.

J. Edward Schipper
Eastern Manager
Graybar Building
New York City

BOSTON OFFICE
Metz B. Hayes, Mgr.
Little Building
Boston, Mass.

PACIFIC COAST
Blanchard, Nichols & Coleman
Am. Nat. Bank Building
San Francisco, Cal.

Cumulative New Commercial Car Registration Table, July, 1929

Returns today: Georgia, Iowa, Kentucky and Nebraska.

Some of this data has been published previously, but it is given here complete for the convenience of our subscribers. Commercial Car Registrations do not include buses.

States	Autocar	Brockway-Indiana	Chevrolet	Diamond-T	Dodge	Fargo	Federal	Ford	G. M. C.	International	Mack	Pierce-Arrow	Relay	Reo	Republic	Rugby	Sterling	Stewart	Studebaker	Whippet	White	Willys-Knight	Miscellaneous	Totals	States
Alabama		2	386		12	1	1	254	1	25				1						13	6		2	704	Ala.
Arizona			71		13	1		96	12	6	1			4		3			2	2	2			213	Ariz.
Arkansas		5	400		26	8		513	12	83	1			4		1			4	15	3		11	1086	Ark.
California	18		475		238	24	27	1558	88	58	37	4		95	3	17	28	6	22	5	37	1	223	2962	Calif.
Conn.	5	9	161	15	52	3	8	234	27	33	48	2	5	43		1	1	15	3	13	6	4	13	700	Conn.
Delaware	2	1	57		4			67	10	10				1						1		1		154	Del.
Florida		3	168		19			351	10	17	1			8					2	3	7			589	Fla.
Georgia	1	4	143		14		2	188	11	20	3								1	9	5			397	Ga.
Idaho			75	1	10	2		64	5	10				10		2				2	4		2	187	Idaho
Illinois	12	14	791	68	159	27	12	1149	49	195	31	1	2	46	1		10	3		51	23		123	2787	Ill.
Indiana		36	418	9	72	6	6	694	46	75			4	48		1		5	10	36	4		10	1480	Ind.
Iowa		4	455	6	46	6	4	435	13	142	5		1	39		2		1	1	33	5	2	7	1207	Iowa
Kansas		7	1891	3	139	34		1546	87	415	2		1	45	4	5		5	8	127	3	11	11	4344	Kan.
Kentucky		6	145	1	15	4		186	10	33	5		1	11	2				2	9	5	2	6	443	Ky.
Maryland	17	6	179	7	28	2	2	282	19	51	15	1		28		1	3	3		5	15	1	24	689	Md.
Michigan	3	4	621		85	8	29	1303	92	108	16	1	2	69	4	3			1	41	5	3	31	2429	Mich.
Minnesota			339	3	48	8	11	471	28	95	4			25		1			4	26	15		20	1098	Minn.
Missouri	4	6	325	12	53	5	2	431	31	48	14			14	1	1	3		2	26	5		5	988	Mo.
Montana			51		12	2		131	4	27				4	1	1			2	3	4			242	Mont.
Nebraska			497	6	29	10	2	409	21	105				7	1	5			4	31	3		12	1142	Neb.
Nevada			24		8	3	1	80	4	5	1			1		2							2	131	Nev.
N. Hamp.	1	6	71	1	18	1	2	133	9	15	3			12		1	1	1	1	3	2		1	282	N. H.
New Jersey	26	25	425	10	124	16	19	780	68	37	64	8		57	1	3	7	8	12	13	33	8	54	1798	N. J.
N. Mexico		1	141		14	10		122	3	32				3						19	4			349	N. M.
N. Carolina	2	3	461		50	6		495	15	25	7			2	1			3	3		8		10	1091	N. C.
N. Dakota			100	1	13	5	1	98	5	70				2						1			2	298	N. D.
Ohio	27	36	608	7	126	20	13	1074	85	168	19	2	3	61	1	3	9	4	13	62	48	4	62	2455	Ohio
Oklahoma	2	15	745	3	54	13	6	741	25	181	8			23		1		1	4	32	12	2	7	1875	Okla.
Oregon			312		30	6	14	437	22	61	13			23	1	12	8		2	8	12		17	978	Ore.
Penn'vania	69	38	716	19	223	37	19	1195	80	134	51		10	87		5	35	32	8	54	54	5	51	2922	Penn.
Rh. Island	3	1	68		26	1	2	88	17	6	13	1		29		3	4	5	2	3	3		4	279	R. I.
S. Carolina		16	200		9	10	3	224	5	12	2			1	1	1		1	1	4	2		4	496	S. C.
S. Dakota			203	1	19	2	1	175	12	103	1			12		1			3	10	1	1	2	547	S. D.
Utah			53		13			101	8	7				5		2			1	2				192	Utah
Virginia		8	235	1	37	1	1	300	19	43	4			20	1	2		5	1	11	6		1	696	Va.
Wash'gton			337		48	11	5	580	23	71	8			29	3	11			5	15	24	1	40	1211	Wash.
W. Virginia		8	202	3	45	2	3	260	18	48			2	16	1	1		5	3	5	5	1	7	635	W. Va.
Wisconsin	1		499	15	64	10	8	746	39	121	5		2	54		3	17	8	2	35	8	1	24	1662	Wis.
Dist. of Col.	1	2	35	5	2			137	6	4	1			4				2		3	14		3	219	D. C.

Figures in this table are from R. L. Polk & Co. of Detroit, with the exception of Illinois, which are supplied by the Robinson Advertising Service, Springfield, Ill., and New Jersey, which are furnished by the New Jersey Motor List Co., New Car Division, Trenton, N. J. Readers desiring county, city or town lists, or lists of owners in any given section, may obtain these by addressing any of these three companies.

Cumulative New Commercial Car Registration Table, August, 1929

States	Autocar	Brockway-Indiana	Chevrolet	Diamond-T	Dodge	Dover	Fargo	Federal	Ford	G. M. C.	International	Mack	Pierce-Arrow	Relay	Reo	Republic	Rugby	Sterling	Stewart	Studebaker	Whippet	White	Willys-Knight	Miscellaneous	Totals	States
Illinois	6	9	718	62	92		15	6	1073	46	140	16			33	1		9	2		40	19		106	2393	Ill.

Somerset, Ky., Sept. 5.—The J. D. Waddle Motor Company of this city has been appointed dealer for the Hupmobile line. The territory will include all of Pulaski county.

KANSAS CITY TRUCK SALES REPORTED HIGH WITH OUTLOOK BRIGHT

Kansas City, Sept. 5.—Kansas City truck dealers and distributors are entering the fall season with the outlook unusually bright and after a satisfactory summer business.

August sales were particularly pleasing to the dealers, who had feared a decline. The month, however, proved to be a good one in most instances, one branch reporting a new month's record and several substantial gains over a year ago.

The branch here of the General Motors Truck Company continues in setting new marks. C. F. Rouse, the branch manager, has been spending his vacation on a tour of dealers in Colorado and other points in the territory. This move in establishing a closer contact with the dealers is proving a profitable one. R. A. Larson, one of the branch salesmen, continues to hold first place in the G. M. C. Distinguished Service Club.

A new Kansas City record was set by the F. W. D. branch in August. Col. Thompson Short, manager, reports sales of trucks and equipment in excess of $60,000 during the month, a figure that passes a three months' quota given the branch. Sales to both the Missouri and Kansas highway departments are included in this figure.

W. L. Simms, manager of the International Harvester Company of America branch here, says August was better than last year in truck sales, with fall prospects unusually good. The International Harvester Company, by the very nature of its organization, is in close touch with the agricultural industry.

While dry weather has materially cut the corn production, there is every indication that the farmers are still buying and that conditions in the Middle West will be at least up to the average this fall.

The sale of Republic trucks here in August is reported by L. L. Morgan of Morgan-Marshall Motors, distributors, as better than a year ago. Prospects are considered as the best in many months. The new Fleetmasters are proving very popular.

The Diamond T branch here concentrated on used truck sales in August, with good results. The salesmen now are set for a big new truck sales campaign, with prospects reported us exceptionally favorable.

Frank Dearinger of the D. M. S.-Indiana Truck Company, says August business was normal, or a little better, and that the fall prospects are excellent.

The Mack-International Motor Truck Company branch had a big gain over a year ago in August, according to P. T. Seiben, office manager. This branch also reports fall prospects as unusually good.

PLUMBING COMPANY ADDS TO CHEVROLET FLEET

Dallas, Tex., Sept. 5 (U. T. P. S.).—The Dallas Plumbing Company, one of the largest in their line here, has recently added six new Chevrolet trucks to their fleet.

These trucks are all equipped with specially designed bodies making them portable plumbing shops. The bodies are covered by patents held by the Dallas Plumbing Company.

Kansas City, Sept. 5.—John L. Grice, manager of the recently established wholesale headquarters of the Indiana Truck Company in St. Louis, has been in Kansas City conferring with Frank Dearinger of the D. M. S.-Indiana Truck Company here. He was accompanied by Howard La Barr, district representative. Grice formerly was manager for the White Company at St. Louis.

WISCONSIN AXLES

Wisconsin superiority has been demonstrated for more than ten years; it can be demonstrated on ...st. Built for trucks from ½ tons to 7 tons, for busses and ... wheelers.

WISCONSIN AXLE CO. Oshkosh, Wis.

CLARK

STRENGTH— beyond any normal need.

LOW COST— due to large volume production.

ACCURACY— assured by special automatic machines.

CLARK METAL WHEELS

CLARK EQUIPMENT COMPANY
Buchanan Michigan

AXLES
Front & Rear
WHEELS
Single or Dual Tire
CAST STEEL HOUSINGS
TRANSMISSIONS

CHEVROLET STARTS FALL CAMPAIGN

Dealers Meet in Many Sections to Study Sales Plans

COLUMBIA, S. C., Sept. 5.—About 500 Chevrolet dealers, sales managers and salesmen, representing many South Carolina points, gathered in Columbia Monday for a sales conference.

P. A. Watson, sales manager for this territory, presided at the meeting. He was assisted by C. D. Asbury, regional sales promotion manager from the Atlanta offices of the Chevrolet Motor Company, and E. B. Gunter, Jr., assistant sales manager, and P. T. Tevis, sales promotion manager of the Columbia zone office.

Optimism for the fall was the keynote of Mr. Watson's address. The meeting was held at the Columbia Theater, followed by a banquet at the Jefferson Hotel Monday evening.

Jacksonville, Fla., Sept. 5.—More than 100 Chevrolet dealers and their sales managers from eastern and southern Florida and southeastern Georgia gathered here last week for a sales conference.

R. D. Wilson, Jacksonville zone sales manager, was in charge of the meeting, and he was assisted by C. D. Asbury, regional sales promotion manager, and T. W. Gordon, Jacksonville zone sales promotion manager.

Officials of the local zone office and the Atlanta regional office outlined the sales program and policies for the last four months of 1929. The meeting was held at the George Washington Hotel.

Dallas, Tex., Sept 5 (U. T. P. S.)—A sales conference was held here recently by the Chevrolet dealers of the Dallas zone. More than 100 dealers attended. R. W. Losey, zone sales manager, was in charge of the meeting. He was assisted by J. C. McNeely, assistant zone sales manager, and J. W. Lambert, zone sales promotion manager.

The object of the meeting was to outline a sales program for the last quarter of the year. Sales of the new models were reported brisk in all sections.

DEALER DOINGS

Cairo, Ga., Sept. 5.—The Grady Chevrolet Company of Cairo led all of the Class B dealers in Zone 26, comprising South Georgia and the whole state of Florida, for sales during July, and a check-up is expected to reveal them in the same position for August.

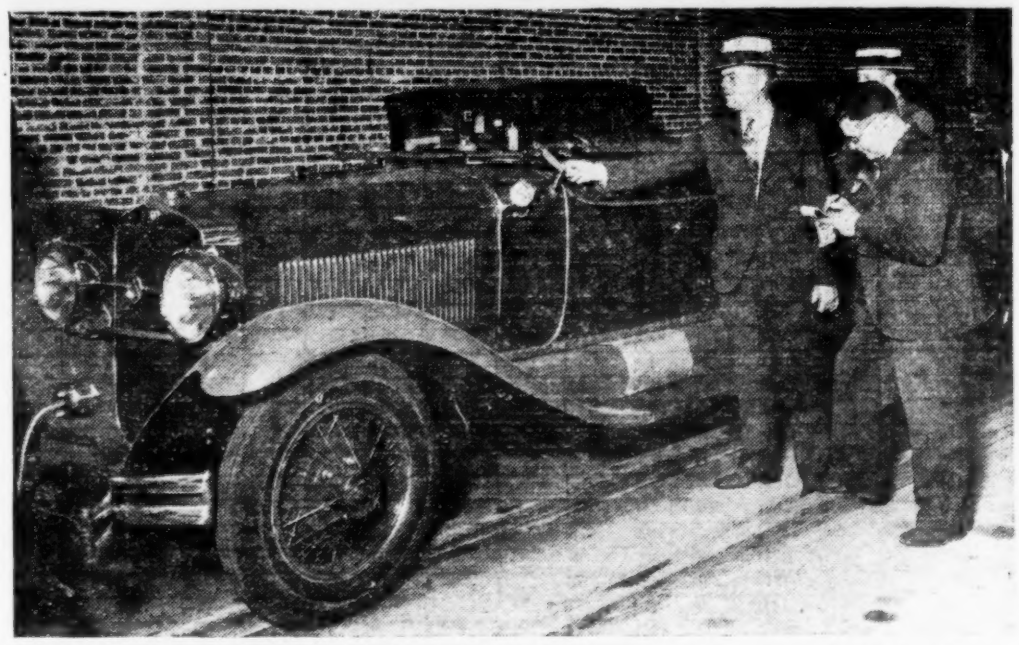
Maysville, Ky., Sept. 5.—Included in the many building activities in this city now going on is the Keith & Keith Motor Company, one of the city's leading garages and automobile dealerships. The company is operated by John D. Keith and T. A. Keith, Jr., and handles Buick, Oldsmobile and Whippet. Plans for the improvement of the plant include the erection of two additional stories in the rear, the moving of the office to the present west driveway and the construction of a ramp which will run the full length of the three stories. The compay will handle all kinds of automobile accessories.

Hartford, Conn., Sept. 5.—Joseph M. Branchberry, president of the Williams Oldsmobile Company, announces that the concern has taken on three additional counties in the state for the distribution of the Oldsmobile and Viking. The new territory embraces the counties of Windham, Tolland and New London. This increase in territory increases the associate dealer personnel of the company materially.

Williamstown, Ky., Sept. 5.—R. D. Pettit, proprietor of the Woodlawn Garage in this city, has been appointed the authorized dealer for the Hupmobile in this city and county. Pettit will handle the products of the Hupp Motor Car Corporation, and will handdle tires, tubes and all other accessories.

Dallas, Tex., Sept. 5 (U. T. P. S.).—Johnnie T. Ormond, Durant dealer at Dallas, has recently consolidated his business with the Dallas Durant Company. Mr. Ormond is now assistant manager of the Dallas Durant Company. He has handled Durant cars since 1925.

Picking Pikes Peak Prize Winner



OFFICIALS OF THE AMERICAN AUTOMOBILE ASSOCIATION are shown above selecting from the assembly line at South Bend, Ind., the Studebaker President Eight Roadster, which won the stock car race up Pikes Peak on Labor Day. The car was taken to Pikes Peak under seal, and there inspected before the race and after the race to insure its right to entry as a stock model. Average speed of the winner during the race was 34.3 miles an hour, sufficient to set a new stock car record for the climb, and carry off the much-coveted Penrose trophy.

CHRYSLER NORTHWEST SERVICE MANAGERS MEET

Portland, Ore., Sept. 5.—Service managers from the Chrysler Motor dealers, Chrysler, Dodge, De Soto, Plymouth, Dodge trucks and Fargo trucks, from the states of Oregon, Washington, Idaho, Montana and Utah, met in Portland last week for the first Northwest Chrysler service convention.

More than 300 service managers, shop superintendents and expert mechanics attended to learn the latest methods of servicing. N. I. Farley, director of the Chrysler Motors Service School of Detroit, conducted the meetings.

GAMBLE HEADS OAKLAND CHICAGO REGIONAL ZONE

Dallas, Tex., Sept. 5 (U. T. P. S.).—W. R. Tracy, vice-preseident in charge of sales for the Oakland Motor Car Company, has recently announced the promotion of Grady Gamble from Dallas zone manager to Chicago regional manager.

The outstanding record made by Mr. Gamble at Dallas is credited as the reason for the promotion.

Hartford, Conn., Sept. 5.—The Franklin Bennett Company has been organized to handle the Franklin in this territory, succeeding the Franklin Napier Company, and will occupy the former premises of the old concern at 51 Farmington Ave. George E. Bennett, formerly vice-president of the Franklin Napier Company, is the president of the new organization. He is also the general manager.

CUMULATIVE NEW PASSENGER CAR

States	Auburn	Black Hawk	Buick	Cadillac	Chevrolet	Chrysler	DeSoto	Dodge	Durant	Elcar	Erskine	Essex	Ford	Franklin	Gardner	Graham-Paige	Hudson	Hupmobile	Jordan	La Salle	Lincoln
Illinois	180	14	1747	94	4078	541	382	570	178		35	876	8071	46	16	444	381	252	10	142	57

CUMULATIVE NEW PASSENGER CAR

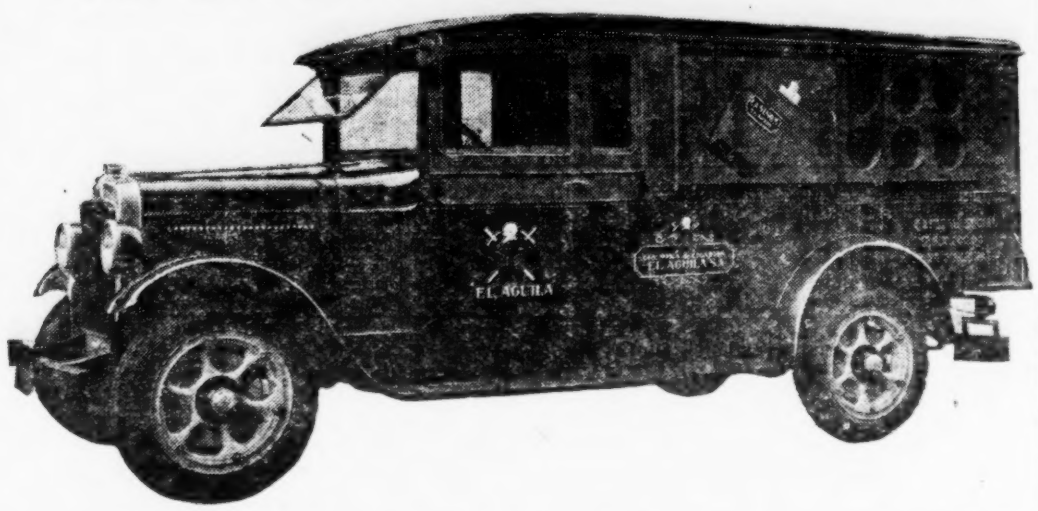
Returns for today: Geor

Some of this data has been published previously, but it is

States	Auburn	Black Hawk	Buick	Cadillac	Chevrolet	Chrysler	DeSoto	Dodge	Durant	Elcar	Erskine	Essex	Ford	Franklin	Gardner	Graham-Paige	Hudson	Hupmobile	Jordan	La Salle	Lincoln
Alabama	2		91	1	1323	51	15	71	8		3	137	1956	2		38	61	20		10	5
Arizona	9	1	34	1	368	26	33	44	54		5	40	487	6		21	19	18		2	1
Arkansas	3		93	8	1522	98	83	159	49		9	92	2796	6		39	22	15		11	7
California	107	10	865	109	4410	624	589	787	715	1	39	926	8526	67	29	511	496	220	11	120	41
Conn'ticut	85	3	282	43	910	226	182	202	45		8	291	1606	49	3	162	103	114	3	49	10
Delaware	10		26	6	190	9	2	7	40		2	52	351	2		4	14	4		11	
Florida	10		103	10	955	80	47	83	7	5	6	145	1801	13		84	71	40	7	24	4
Georgia	3		59	3	480	25	21	34	3		8	28	1053	6		27	11	10		11	3
Idaho	1		54	1	379	22	23	49	94		7	66	526	2		22	20	1		1	
Illinois	256	16	783	119	5116	655	504	893	261	21	29	1323	9072	56	18	553	560	397	12	209	72
Indiana	101	4	318	27	3230	244	289	416	98	14	32	970	5676	14	7	211	294	74	16	36	19
Iowa	53	3	231	15	3196	109	107	327	251		23	417	4706	4		142	121	72	1	26	10
Kansas	44		222	6	3104	149	192	401	142		20	527	5310	10		119	210	59		11	8
Kentucky	18	1	56	1	1127	82	79	133	47		10	232	1844	10	2	46	50	38	3	10	6
Louisiana	11		94	2	1061	73	53	139	13		6	58	1602	1	4	45	27	22		8	6
Maine			68	4	471	66	22	73	35		7	191	842	12	2	29	58	11		12	3
Maryland	14	2	144	11	1152	108	35	103	54	1	5	240	1577	14	1	81	69	49	3	16	14
Mass'setts	89	9	624	68	2145	392	206	474	111		19	1080	4799	98	25	257	325	185	14	139	18
Michigan	58	2	874	56	4675	261	319	454	202	7	16	1554	9759	10	9	450	550	257		86	32
Minnesota	29	2	163	4	1900	151	78	188	160	3	35	388	4611	4	3	161	125	81	5	26	6
Missouri	34	1	212	20	1534	133	91	174	145		5	348	2582	19	14	96	90	93	5	33	11
Montana	10		33	3	320	35	28	56	45		3	86	527	7		24	34	11		5	
Nebraska	8		147	1	1603	85	55	165	80		6	126	2737	2	6	51	36	22		4	7
Nevada	8		40	4	116	27	14	24	23		1	32	188	3		6	23	5	2	7	
N. Hamp.	6		49		305	46	38	47	39	2	5	80	472	14		22	25	17	2	7	1
N. Jersey	167	7	493	57	2276	431	283	380	138		18	770	4120	98	10	292	299	241	13	102	19
N. Mexico	5		30		384	24	33	46	12		4	28	414	1		25	8	2		1	1
N. Carolina	6		114	3	1630	169	84	171	46		3	201	3064	6		41	80	24		11	4
N. Dakota	3		29	1	468	28	32	45	39		12	62	968	1		28	12	5			1
Ohio	151	6	500	60	5074	427	477	512	283	7	38	1545	9553	60	9	462	474	291	25	55	33
Oklahoma	27	1	336	6	2796	172	111	465	71		21	204	4168	21		83	83	55	2	30	9
Oregon	18		171	4	950	76	49	143	246		10	194	1849	11	2	57	60	29		11	3
Penn'vania	192	12	641	81	4345	889	505	803	404	9	33	1743	7853	129	14	556	567	419	47	160	26
Rh. Island	23		84	16	432	105	67	67	23	4	1	147	579	22	2	71	45	37		31	5
S. Carolina		1	51	3	948	50	63	30	4		1	60	1677	5		7	32	9		8	1
S. Dakota	12		53	1	901	52	25	106	121		14	111	1540			38	18	35		1	
Utah		1	71	3	487	26	27	66	90		2	102	709	2		47	26	24		2	
Vermont	2		17	1	162	24	27	25	11		3	58	271	2		16	35	18		1	1
Virginia	12		120	5	1543	101	68	172	51		6	232	2468	10		48	48	47	1	9	3
Wash'gton	47	4	270	8	1107	192	134	158	337		12	313	2365	16		94	126	66	4	10	3
W.Virginia	8	3	92	6	1142	123	81	231	49		7	242	1655	4		123	54	36	4	13	10
Wisconsin	38	3	445	10	2681	254	222	318	178	2	32	682	4544	33	10	231	283	97	3	16	10
Dis. of Col.	11		133	6	418	55	28	24	8	1	2	120	965	10	1	56	34	36	3	15	2

Figures in this table are from R. L. Polk & Co. of Detroit, with the exception of Illinois, which are supplied by the Robinson Advertising desiring county, city or town lists, or lists of owners in any given

Truck Sold in Jersey to "Talk" to Mexicans



THE WATSON SHALLCROSS, Inc., Camden, N. J., Dodge truck distributor, has delivered to the British American Tobacco Company, the Dodge truck shown above, which was equipped by the Audio Vision Appliance Company with a reproducing machine operating directly from the motor. The body was designed and painted by the Collings Carriage Company, Inc., of Camden, designer and builder of custom made bodies. The truck will be used for advertising purposes in Mexico

CADILLAC-LA SALLE MIDWEST DEALERS MEET

Kansas City, Sept. 5.—The annual meeting of the Cadillac-La Salle dealers of the middle-western territory was held here last week, with approximately 300 dealers in attendance.

The territory covered by the meeting reaches west from St. Louis to Denver and south from Canada to the Gulf of Mexico and includes Texas and Tennessee. The Greenlease Motor Company, Cadillac-La Salle distributor here, was the host. H. R. Bishop, the company manager, arranged the details of the meeting.

Dallas, Tex., Sept. 5 (U. T. P. S.).—A new authorized service and parts station for Chevrolet cars was recently opened here by M. L. Clayton.

Aviation Daily News

TO LAY CORNERSTONE FOR N. Y. SEAPLANE AIRPORT

New York, Sept. 5.—The cornerstone for the New York seaplane airport of the American Aeronautical Corporation at Port Washington, L. I., on Manhasset Island, will be laid Saturday, September 14.

The building, including offices for the company, manufacturing plant, hangars and landing facilities for visiting airplanes and company ships, it is claimed, will be the largest single unit airplane plant in the world when it is completed, at the end of this year.

INTERSTATE AIRLINES, INC., ADDS NEW EQUIPMENT

Chicago, Sept. 5.—The Interstate Airlines, Inc., which operates air mail and passenger planes into Chicago from Atlanta, has just added two Swallow TP biplanes bringing its present fleet of ships to twenty-six. Ten student training planes are maintained by Interstate at the Evansville, Ind., Nashville and Chattanooga flying schools. Interstate mail planes are chiefly Fairchild monoplanes and Stearman biplanes.

KDKA PAINTS ANTENNA POLES AS AIR MARKERS

Pittsburgh, Pa., Sept. 5.—The antenna poles on station KDKA on the hill above East Pittsburgh have taken on a stick candy appearance as the result of ever increasing air traffic. In order to make them easily visible to passing planes they have been painted black and chrome yellow in stripes. This is the standard color and design recommended by the Department of Commerce. All Westinghouse radio antenna poles will be subjected to this treatment in the future, according to Walter C. Evans, superintendent of radio operations.

N. A. T. CLIPS TIME FROM N. Y.-CHICAGO SCHEDULE

Chicago, Sept. 5.—An average of two minutes a night and forty-two minutes a day were clipped off the schedule between Chicago and New York city during the month of July. A total of ninety-five eastbound night flights by National Air Transport planes was completed in an average elapsed time of 7 hours and 43 minutes. The scheduled time for the night flights is 7 hours and 45 minutes. The fastest time was made July 3, when the second eastbound section covered the 712 miles in 5 hours and 50 minutes, including the regular stops at Toledo and Cleveland.

NAME DIRECTORS FOR AIR LAW INSTITUTE

Chicago, Sept. 5.—The organizers of the air law institute of Northwestern University have completed the details of the permanent organization. A board of directors was chosen and one of its first acts was to confirm the appointment of Prof. F. D. Fagg, Jr., as managing director of the institute. Prof. Fagg during the last year has directed the air law institute at Konigsberg, Germany. The Chicago Institute, the first of its kind in this country, will collate laws pertaining to air traffic.

DETROIT AIRCRAFT BUYS CALIFORNIA PLANT SITE

Detroit, Sept. 5.—Purchase by the Detroit Aircraft Corporation of a thirty-acre tract at Long Beach, Cal., for the erection of a large, modern airplane factory has been announced. E. S. Evans, president of the Detroit Aircraft Corporation, states that the final details were approved at a meeting of the executive committee and that work would be started as soon as possible on the building of a new plant.

CANADIAN COLONIAL LINE BOASTS PERFECT OPERATION

New York, Sept. 5.—Canadian Colonial Airways, operating air mail and passenger planes between New York and Montreal and Montreal and Albany, established a perfect operation record during the months of July and August. Every one of the 108 scheduled trips was completed on time, according to W. Hale Francisco, division superintendent of Canadian Colonial. During August, 145 passengers were carried over the Canadian line.

AEROCAR DISTRIBUTORSHIP OPENED IN PHILADELPHIA

Philadelphia, Sept. 5.—Wilkinson & Co. have taken space at 441 North Broad St. to distribute the Aerocar, a sample A-20, standard tourist model, being on display.

The territory covered embraces the lower half of New Jersey, all of eastern Pennsylvania and the cities of Baltimore and Washington. Those associated with the company are R. H. Wilkinson, J. R. Wilkinson, for five years with Packard, Inc., and C. J. Wilkinson, formerly identified with the sales division of the Oakland Motor Car Company, Detroit. Sales have started out auspiciously, a number of orders having been placed.

CAPITOL CAR COMPANY TO DISTRIBUTE DURANT

Wheeling, W. Va., Sept. 5.—Rapid expansion of the Durant retailing organization east of the Mississippi was marked by the appointment of the Capitol Car Company here to be Durant distributor in five West Virginia and two southern Ohio counties.

The company brings to the task of distributing Durant passenger cars and Rugby trucks more than fifteen years of experience in the automobile business, and for the past three years have been handling Durants.

PACKARD ENTERTAINS 129 MASTER SALESMEN

Detroit, Sept. 5.—Star salesmen of the Packard Motor Car Company from all parts of the world attended the fifth annual Packard master salesmen's convention here last week. The 129 men who won the honor of being called master salesmen this year were guests of the company for three days.

REGISTRATION TABLE, AUGUST, 1929

States	Locomobile	Marmon	Marquette	Nash	Oakland	Oldsmobile	Packard	Peerless	Pierce-Arrow	Plymouth	Pontiac	Reo	Roosevelt	Stearns-Knight	Studebaker	Stutz	Viking	Whippet	Willys-Knight	Windsor	Miscellaneous	Totals
Illinois		44	151	812	218	717	461	89	50	570	1165	90	128	8	753	17	55	771	186	7	300	24,706

REGISTRATION TABLE, JULY, 1929

gia, Kansas and Kentucky

given here complete for the convenience of our subscribers

States	Locomobile	Marmon	Marquette	Nash	Oakland	Oldsmobile	Packard	Peerless	Pierce-Arrow	Plymouth	Pontiac	Reo	Roosevelt	Stearns-Knight	Studebaker	Stutz	Viking	Whippet	Willys-Knight	Windsor	Miscellaneous	Totals
Alabama		5	20	29	12	11	12			58	59	5	12		33			115	2		1	4173
Arizona		9	12	55	12	39	7		2	29	56	1	17		43			45	11	1		1508
Arkansas		4	29	73	21	42	4		3	170	167	13	13		34		2	165	21	1		5774
California		53	239	682	177	502	214	40	61	316	772	145	120	11	877	10	61	326	338	32	183	24,362
Conn'ticut		23	58	237	74	141	126	13	36	156	333	69	53	1	194	7	16	207	54	1	12	6187
Delaware		1	24	30	12	17	6	2	1	23	65	2	1		21		1	21	7			964
Florida		3	47	73	32	46	22	3	6	55	121	22	9	1	35	2	3	133	23		5	4136
Georgia		3	30	23	10	23	6		1	30	44	2	8		19			59	8			2051
Idaho		2	10	23	8	19	4		1	43	50	3	5		20		2	58	11			1532
Illinois	1	47	318	1135	265	883	291	81	50	813	1651	152	147	5	830	22	109	1083	224	22	779	29833
Indiana		74	129	337	118	593	89	13	23	451	791	31	132		512	15	26	763	86	1	26	16,300
Iowa		16	121	267	49	311	34	18	2	355	519	32	51		173	4	17	773	60	3	8	12,627
Kansas		15	121	334	76	264	27	13	11	380	725	26	33		140	6	11	841	66	6	11	13,640
Kentucky		4	29	43	17	83	29	4	4	103	131	21	19		83	2	6	213	31		4	4,631
Louisiana		6	32	150	16	47	16	4	2	79	185	8	11		37	1	2	75	17			3913
Maine		6	25	97	14	58	25	14	1	97	147	21	15		48	2	2	125	18	2	3	2626
Maryland		7	50	97	32	96	24	5	10	124	269	13	17		87	3	8	168	43		1	4747
Mass'setts	1	32	120	503	111	279	242	50	66	264	664	114	88	11	413	4	21	393	246	8	44	14,751
Michigan		37	405	276	116	817	136	19	29	547	1032	121	113		422	4	50	736	126	3	8	24,628
Minnesota		6	101	186	72	234	72	7	12	437	521	22	26	1	164	3	13	616	143	2	10	10771
Missouri		20	71	194	41	219	60	16	28	188	235	24	33	1	133	3	3	528	61	11	10	7519
Montana		11	13	39	10	22	6	1	1	89	64	5	9		31		4	99	19		1	1651
Nebraska		8	68	103	38	154	10	8	2	162	257	8	17		99		6	344	31	4	2	6462
Nevada		3	9	11	3	15	8	2		17	15	4	4		21		3	9	5			652
N. Hamp.		7	15	59	13	43	11	2		46	63	11	11	3	31		2	60	15		2	1571
N. Jersey	2	34	142	694	115	471	280	64	100	301	585	89	90	21	402	8	40	383	208	14	19	14,276
N. Mexico		2	17	24	6	24	2			30	28	3	5		18	1	1	61	11			1251
N. Carolina		4	89	68	47	77	19	3		164	262	3	14	1	40		6	231	13			6698
N. Dakota		9	21	52	8	49	7		1	77	83	1	12		27	2	3	158	25		6	2275
Ohio		54	290	556	206	1018	183	147	50	594	1368	85	179	8	614	13	49	1341	349	7	37	27,190
Oklahoma		3	75	174	80	136	53	2	18	217	456	52	16		103	6	8	551	38	7	3	10659
Oregon		10	43	103	36	126	19		6	140	211	27	27		98	2	8	126	60		1	4931
Penn'vania	2	60	309	877	248	834	335	111	102	825	1192	131	210	12	590	14	30	1061	320	20	32	26,743
Rh. Island		6	18	83	9	66	33	11	14	67	121	32	16	1	50	1	5	62	39		13	2408
S. Carolina		1	29	23	12	38	5			62	96	3	5		23		2	59	1			3305
S. Dakota		6	36	81	22	130	6	1	1	149	138	8	19		54		7	271	32		1	3990
Utah		1	8	44	11	44	6		1	42	61	3	5		31	2	3	56	11			2014
Vermont		3	13	43	10	20	10	5	3	42	25	7	3		10		2	76	13			959
Virginia		1	58	81	49	77	34	3	3	137	230	15	26		51	2	7	234	29		1	5982
Wash'gton		7	50	138	45	203	30	7	10	297	213	36	47	1	184	2	13	195	96		5	3845
W.Virginia		11	45	117	32	107	29	2	3	133	180	19	28		72	2	8	257	45			4973
Wisconsin		21	140	493	130	444	58	16	34	494	707	36	66	1	307	2	12	695	121	1	32	13,902
Dis. of Col.		7	13	64	22	105	33	8	13	37	117	15	27		67	3	14	39	11		13	2536

Service, Springfield, Ill., and New Jersey, which are furnished by the New Jersey Motor List Co., New Car Division, Trenton, N. J. Readers section, may obtain these by addressing any of these three companies.

1929
XUM

MAJOR SPECIFICATIONS AND MECHANICAL DETAILS OF

Make and Model	Capacity—tons	Chassis price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gearset	Location	No. Spds. for.	Rear Axle	Final Drive	Reduction in Low	Brakes, foot	Brakes, hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
Am. La France Chief	2	2850	Own	6	3¾x5	33.0	Pw	Str	Vac	Rem	Own	C	4	Tim	Wo	31.2	4	D	156	6200	32x6	32x6 D
Am. La France W	3-4	3850	Own 2 R	4	4¼x6	28.9	P&S	Zen	Vac	A B	Own	C	4	Own	D R	47.4	D	R	160	7200	S 36x5	S 36x5 D
Am. La France S	4-4½	5200	Own 5 R	4	4¾x6	36.2	P&S	Zen	Vac	A B	Own	C	4	Own	Wo	54.4	D	R	165	8900	S 36x8	S 36x6 D
Am. La France V	5	5500	Own 5 R	4	4¾x6	36.2	P&S	Zen	Vac	A B	Own	C	4	Own	Wo	54.4	D	R	165	9800	S 36x5	S 40x6 D
Am. La France Z	6½	5750	Own 5 R	4	4¾x6	36.2	P&S	Zen	Vac	A B	Own	C	4	Own	Wo	63.5	D	R	165	10000	S 36x7	S 40x7 D
Am. La France U	7½	6900	Own 5 R	4	4¾x6	36.2	P&S	Zen	Vac	A B	Own	C	4	Own	—	63.5	D	R	165	10500	S 36x7	S 40x8 D
Am. La Fran. Big Chief	6		Own	6	4½x6	48.6	Pw	Zen	Vac	Rem	Own	C	4	Own	D R	32.8	W	D	226	10600	S 40x8	40x8 D
Autocar S A	1½	2700	Her	6	3⅜x4½	33.8	Pb	Zen	Vac	L-N	Br-L 35	U	4	Own S A	Sp	27.9	4	R	150	4400	32x6	32x6
Autocar S D	2	3000	Her	6	3⅜x4½	33.8	Pb	Zen	Vac	L-N	Br-L 35	U	4	Own S D	D R	33.9	4	R	150	4850	32x6	32x6 D
†Autocar H	3	3750	Own	4	4½x5½	32.4	C S	Str	Gra	A B	Own T	U	4	Own H	D R	48.9	R	R	114	5800	34x5 S	36x10 S
†Autocar S H	3	4000	Her	6	4⅛x4¾	40.8	Pb	Str	Gra	R B	Own T	U	4	Own H	D R	48.9	R	R	114	5800	34x5 S	36x10 S
Autocar T	3	5000	Her	6	4⅜x4¾*	45.9	Pb	Str	Vac	R B	Own T	U	4	Own T	D R	72.5	R	R	167	7100	36x8	36x8 D
†Autocar H S	3½	4100	Own	4	4½x5½	32.4	C S	Str	Gra	A B	Own T	U	4	Own J	D R	55.2	R	R	114	6900	34x6 S	36x12 S
†Autocar S H S	3½	4400	Her	6	4⅛x4¾	45.9	Pb	Str	Gra	R B	Own T	U	4	Own J	D R	55.2	R	R	114	7000	34x6 S	36x12 S
Autocar T S	3½	5350	Her	6	4⅜x4¾	45.9	Pb	Str	Vac	R B	Own T	U	4	Own Chs	D R	81.7	R	R	167	7100	36x8	36x8 D
Autocar S C M	5	5000	Her	6	4½x4¾	48.6	Pb	Str	Vac	R B	Own B	C	4	Own M	D R	72.1	R	R	162	8600	34x7 S	36x14 S
Brockway Junior	1	1195	Wis C	4	3¾x5	22.5	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 36001	Sp	21.27	4	Tr	130	3100	30x5	30x5
Brockway J F	1	1195	Wis F	6	3¼x4¼	25.4	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 36001	Sp	21.3	4	Tr	137	3450	30x5	30x5
Brockway C J B F	1½	1475	Wis F	6	3¼x4¼	25.4	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 55001	Sp	21.3	4	Tr	149	3650	32x6	32x6
Brockway E	1½	1765	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	L-N	Br-L 30	U	3	Col 55001	Sp	21.0	4	Tr	139½	3650	32x6	32x6
Brockway E N	1½	1965	Wis N	6	3½x4¼	29.4	Pb	Zen	Vac	Aut	Br-L 35	U	4	Col 55001	Sp	31.3	4	Tr	155¾	4400	32x6	32x6
Brockway S	2	2450	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	L-N	Br-L 35	U	4	Wis 4610	D R	38.79	R	Tr	150¼	5100	S 34x4	S 34x8
Brockway S Y	2	2950	Wis Y	6	3⅜x5	27.3	Pb	Zen	Vac	L-N	Br-L 35	U	4	Wis 4610	D R	35.3	4	Tr	151¾	4950	32x6	34x7
*Brockway K	3	3420	Con K	4	4⅛x5¼	27.2	Pw	Zen	Vac	Eis	Br-L 35	C	4	Tim 65700 S	Wo	41.5	R	D	154⅛	5855	S 36x5	S 36x10
Brockway K R	3	3625	Con L	4	4½x5½	32.4	Pw	Zen	Vac	Eis	Br-L 55	C	4	Tim 65700 S	Wo	36.38	R	D	160⅝	6290	S 36x5	S 36x10
Brockway K W	3	3950	Wis H	6	4 x5	38.2	Pb	Zen	Vac	L-N	Br-L 51	U	4	Wis 69300	D R	33.7	R	D	170	6920	34x7	D 34x7
*Brockway R	4	4200	Con L	4	4½x5½	32.4	Pw	Zen	Vac	Eis	Br-L 55	C	4	Tim 66600	Wo	46.8	R	R	164	7890	S 36x5	S 36x12
Brockway T	5-7	5200	Con B 7	4	5 x6	40.0	Pw	Zen	Vac	Eis	Br-L 60	C	4	Tim 68700	Wo	53.5	R	D	175	10065	S 36x6	S 40x14
Chevrolet	½	400	Own	6	3⅛x3¾	26.3	C S	Car	P	Rem	Own	U	3	Own	Sp	12.68	4	R	107	1815	4.50x20	4.50x20
Chevrolet	1½	545	Own	6	3⅛x3¾	26.3	C S	Car	P	Rem	Own	U	4	Own	Sp	30.05	4	R	131	2375	30x5	30x5
Commerce 20 Y	1	1600	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.5	4	D	142	3900	B 30x5	B 30x5
Commerce S 11 Y	1½	1900	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4300	B 30x5	D B 30x5
Commerce 30 Z	1½	2900	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4700	B 34x5	D B 34x5
Commerce 40 Z	2	3240	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vas	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4900	B 36x6	D B 36x6
Commerce 50 Z	2½	4415	Bud B U S	6	4 x5⅛	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Tim	Wo	63.0	4	D	175	7000	S 36x5	S 36x10
Commerce 60 Z	3	4480	Bud B U S	6	4 x5⅛	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Tim	We	63.0	4	D	175	7100	S 36x5	S 36x12
Commerce 70 Z	3½	5250	Bud B A 6	6	4⅛x5⅛	40.8	Pw	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	R	D	175	8200	S 36x6	S 36x12
Commerce 80 Z	4	5330	Bud B A 6	6	4⅛x5⅛	40.8	Pw	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	R	D	175	8400	S 36x6	S 36x14
Day Elder M F	1¼	1345	Con 16-C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	Rem	Br-L 20A	U	3	Tim 52000 H	Sp	24.2	4	D	131	3100	30x5	30x5
Day Elder G F	1½	2050	Con 16-C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	Rem	Br-L 20A	U	3	Tim 54000 H	Sp	28.3	4	D	156	3900	30x5	32x6
Day Elder H F	2	2500	Con 16-C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	Rem	Br-L 35	U	4	Tim 63702 H	Wo	40.7	4	D	156	4400	S 34x4	S 34x7
Day Elder J F	3	3900	Con 18 R	6	4 x4½	38.4	Pb	Zen	Vac	Rem	Br-L 51	U	4	Tim 65000 H	Wo	41.5	4	D	156	6500	S 36x5	S 36x10
Day Elder K 6	4-5	4775	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	Vac	Rem	Br-L 60	C	4	Tim 66702 D	Wo	55.2	R	D	170	8500	S 36x5	S 36x12
Diamond T 151	1	1095	Con 18 E	6	3⅜x4	27.3	Pb	Zen	Gra	Aut	Cov	U	3	Col	Sp	—	4	D	132	3200	30x5	30x5
Diamond T 290	1½	1475	Her W X A	6	3½x4½	29.4	Pb	Zen	Gra	Aut	Cov	U	4	Col	Sp	—	4	D	156¼	4160	30x5	30x5 D
Diamond T 302	2	1650	Her W X B	6	3¾x4½	33.8	Pb	Zen	Gra	Aut	Cov	U	4	Clark	Sp	—	4	D	157¾	4600	32x6	32x6 D
Diamond T 502	2½	2675	Her W X C	6	4 x4½	38.4	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Wo	—	4	D	163	5850	34x7	34x7 D
Diamond T 505	2½	2875	Her W X C	6	4 x4½	38.4	Pb	Zen	Vac	Aut	Cov	U	4	Wis	D R	—	4	D	171½	5850	34x7	34x7 D
Diamond T 550	2½	2195	Her W X C	6	4 x4½	38.4	Pb	Zen	Vac	Aut	Cov	U	4	Clark	Sp	—	4	D	165	5400	32x6	32x6 D
Diamond T 601	3	3510	Her Y X C	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Br-L	A	4	Tim	Wo	—	4	D	163½	7400	36x8	36x8 D
Diamond T 605	3	3810	Her Y X C	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Cov	U	4	Wis	D R	—	4	D	161½	7400	36x8	36x8 D
Diamond T 700	3½	4850	Her Y X C	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Cov	A	4	Tim	Wo	—	R	D	162	8100	S 36x5	S 36x10
Diamond T 800	4	5325	Her Y X C	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Br-L	A	7	Own	Wo	—	4	D	195⅜	8300	36x8	4WH 36x8
Diamond T 1000	5	5500	Her Y X C 2	6	4½x4¾	48.6	Pb	Zen	Gra	Aut	Br-L	A	4	Tim	Wo	—	R	D	170½	10000	S 36x6	S 40x12
Diamond T 2500	10-12	9750	Wak	6	5 x5¾	60.0	Pb	Zen	Gra	Aut	Br-L	A	7	Tim	Wo	—	4	D	194	13100	S 36x7	S4W 36x12
Dodge Bros.	½	665	Own	4	3⅝x4¼	21.03	Pb	Stw	Vac	N E	Own	U	3	Own	Sp	15.2	4	D	110	1965	29x5.00 B	29x5.00 B
Dodge Bros.	¾	775	Own	6	3⅜x3⅞	27.3	Pb	Stw	Vac	N E	Own	U	3	Own	Sp	17.4	4	D	120	2510	31x5.25 B	31x5.25 B
Dodge Bros.	1	995	Own	6	3⅜x3⅞	27.3	Pb	Stw	Vac	N E	W-G	U	4	Own	Sp	23.8	4	D	130	2920	30x5	30x5
Dodge Bros.	1	1065	Own	6	3⅜x3⅞	27.3	Pb	Stw	Vac	N E	W-G	U	4	Own	Sp	23.8	4	D	140	2955	30x5	30x5
Dodge Bros.	1½	1345	Own	6	3⅜x3⅞	27.3	Pb	Stw	Vac	N E	Own	U	4	Own	Sp	36.8	4	D	150	3695	32x6	32x6
Dodge Bros.	1½	1415	Own	6	3⅜x3⅞	27.3	Pb	Stw	Vac	N E	Own	U	4	Own	Sp	36.8	4	D	165	3610	32x6	32x6
Dodge Bros.	2	1445	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	N E	Own	U	4	Own	Sp	41.4	4	D	114	3725	32x6	34x7
Dodge Bros.	2	1545	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	N E	Own	U	4	Own	Sp	41.4	4	D	150	3930	32x6	34x7
Dodge Bros.	2	1615	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	N E	Own	U	4	Own	Sp	41.4	4	D	165	4070	32x6	34x7
Dodge Bros.	3	1745	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	N E	Own	U	4	Own	Sp	46.3	4	D	135	4225	32x6	32x6 D
Dover	¾	595	Own	6	2¾x4½	18.27	P&S	Mar	Vac	Aut	Own	U	3	Own	Sp	..	4	4	110	2150	30x5	31x5.50
Durant Com. Chassis	½	495	Con	4	3⅜x4¼	18.2	Pb	Til	Vac	Aut	Own	C	3	Own	Sp	16.16	4	4	107	1670	28x4.75	28x4.75
Fargo Packet	½	545	Own	6	3 x4⅛	21.6	Pb	Str	Vac	N E	Own	U	3	Own	Sp	14.29	4	Tr	—	1835	5.00x19	5.00x19
Fargo Clipper	¾	725	Own	6	3⅛x4¼	23.4	Pb	Str	Vac	Rem	Own	U	3	Own	Sp	15.53	4	Tr	—	2325	5.50x18	5.50x18
Fargo Freighter	1	795	Own	6	3 x4⅛	21.6	Pb	Str	Vac	N E	Own	U	4	Own	Sp	37.19	4	Tr	133	2785	6.00x20	32x6
Ford A A	1½	540	Own	4	3⅞x4¼	24.0	P&S	Zen	Gra	Own	Own	U	3	Own	Wo	16.1	4	4	131½	2282	6.00x20	32x6
F. W. D.—H	2	3300	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	Eis	Cotta	C	4	Own	St	38.1	4	R	121	5300	34x7	34x7
F. W. D.—H 6	2	3425	Wak	6	3½x4½	29.4	Pb	Zen	Vac	Eis	Br-L	U	4	Own	St	35.0	4	R	133	5500	34x7	34x7
F. W. D.—B	3	4200	Own	4	4¾x5½	36.1	Pb	Str	Gra	Eis	Own	C	3	Own	St	35.6	4	R	124	6460	36x6 S	36x6 S
F. W. D.—B 5	3	4525	Own	4	4¾x5½	36.1	Pb	Str	Gra	Eis	Own	C	5	Own	St	88.6	4	R	132	6800	36x6 S	36x6 S
F. W. D.—U 6	3½	4575	Wak	6	4 x4¾	38.6	Pb	Zen	Vac	Eis	Own	C	5	Own	St	88.6	4	R	148	7200	36x6 S	36x6 S
F. W. D.—BTL 4	2	3900	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	Eis	Br-L	C	7	Own	St	84.7	4	R	120	6000	36x8	36x8
F. W. D.—B T	3	4742	Own	4	4¾x5½	36.1	Pb	Str	Vac	Eis	Own	C	5	Own	St	101.0	4	R	133¾	7700	40x7 S	40x5 S D
F. W. D.—U 4	3	4575	Own	4	4¾x5½	36.1	Pb	Str	Vac	Eis	Own	C	5	Own	St	88.6	4	R	148	7000	36x6 S	36x6 S
F. W. D.—X 6	6	6500	Wak	6	4¼x4¾	43.3	Pb	Zen	Vac	Eis	Own	C	5	Own	St	88.6	4	4	170	9500	36x8	36x8
Garford 20 Y	1	1600	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.5	4	D	142	3900	B 30x5	B 30x5
Garford S 11 Y	1½	1900	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4300	B 30x5	D B 30x5
Garford 30 Z	1½	2990	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4700	B 34x5	D B 34x5
Garford 40 Z	2	3240	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4900	B 36x6	D B 36x6
Garford 50 Z	2½	4419	Bud B U S	6	4 x5⅛	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Tim	Wo	63.0	4	D	175	7000	S 36x5	S 36x10
Garford 60 Z	3	4480	Bud B U S	6	4 x5⅛	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Tim	Wo	63.0	4	D	175	7100	S 36x5	S 36x12
Garford 70 Z	3½	5250	Bud B A 6	6	4⅛x5⅛	40.8	Pw	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	R	D	175	8200	S 36x6	S 36x12
Garford 80 Z	4	5330	Bud B A 6	6	4⅛x5⅛	40.8	Pw	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	R	D	175	8400	S 36x6	S 36x14
Gen. Mot. T 11-1001	*3800	625	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	Rem	Pontiac	U	3	Pontiac	Sp	14.67	4	D	109¾	1980	5.00x19 B	5.50x19 B
Gen. Mot. T 19-2001	*8000	1015	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	Rem	Mun	U	4	Tim 5261-N	Sp	34.11	4	D	127¾	3075	32x6	34x7
Gen. Mot. T 19-2002	*8000	975	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	Rem	Mun	U	4	Tim 5261-N	Sp	34.11	4	D	127¾	3000	30x5	30x5 D
Gen. Mot. T 19-2003	*6000	895	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	Rem	Mun	U	4	Tim 5261-N	Sp	34.11	4	D	127¾	2925	5.50x20 B	32x6
Gen. Mot. T 30-3001	*10000	1530	Buick	6	3⅛x4⅝	26.3	Pb	Mar	P	Rem	Mun	U	4	Eat 1616	Sp	28.6	4	D	136	4200	32x6	36x8
Gen. Mot. T 30-3002	*10000	1505	Buick	6	3⅝x4⅝	26.3	Pb	Mar	P	Rem	Mun	U	4	Eat 1616	Sp	28.6	4	D	136	4125	32x6	32x6 D
Gen. Mot. T 30-3003	*8000	1395	Buick	6	3⅝x4⅝	26.3	Pb	Mar	P	Rem	Mun	U	4	Eat 1616	Sp	28.6	4	D	136	4075	6.00x20 B	34x7
Gen. Mot. T 42-4001	*12000	1885	Buick	6	3⅛x4⅝	26.3	Pb	Mar	P	Rem	Mun	U	4	Own	Sp	33.38	4	D	136	4690	32x6	36x9
Gen. Mot. T 42-4002	*12000	1790	Buick	6	3⅝x4⅝	26.3	Pb	Mar	P	Rem	Mun	U	4	Own	Sp	33.38	4	D	136	4640	32x6	32x6 D
Gen. Mot. T 42-4003	*10000	1685	Buick	6	3⅝x4⅝	26.3	Pb	Mar	P	Rem	Mun	U	4	Own	Sp	33.38	4	D	136	4510	7.00x20 P	36x8
Gen. Mot. T 60-5001	*16000	3215	Buick	6	3⅝x5	31.5	Pb	Mar	P	Rem	Mun	U	4	Tim 65706-N	Wo	44.81	4	D	140	6090	38x7	44x10
Gen. Mot. T 60-5002	*18000	3160	Buick	6	3⅝x5	31.5	Pb	Mar	P	Rem	Mun	U	4	Tim 65706-N	Wo	44.81	4	D	140	6425	36x8	36x8 D
Gen. Mot. T 60-5003	*14500	2800	Buick	6	3⅝x5	31.5	Pb	Mar	P	Rem	Mun	U	4	Tim 65706-N	Wo	44.81	4	D	140	6090	36x6	36x6 D
Gen. Mot. K 102-6001	*28000	4250	Own 89	4	4½x6½	32.4	Pw	Zen	Vac	Eis	Mun	C	7	Tim 67600	Wo	86.3	R	R	160	9520	36x6 S	40x14 S
Gen. Mot. K 102-6002	*28000	4350	Own 89	4	4½x6½	32.4	Pw	Zen	Vac	Eis	Mun	C	7	Tim 67600	Wo	86.3	R	R	184	9600	36x6 S	40x14 S
Gramm B	1½	1395	Lyc S	6	3¼x4½	25.3	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Sp	32	4	R	140	3300	30x5	30x5 D
Gramm C	2	1795	Lyc T S	6	3⅞x5	36.2	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Sp	29	4	R	160	3800	32x6	32x6 D
Gramm D	2½	1995	Lyc T S	6	3⅞x5	36.2	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	30	4	R	160	4920	32x6	32x6 D
Gramm E	3	2795	Lyc T S	6	3⅞x5	36.2	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	35	4	R	150	5200	34x7	34x7 D
Gramm EY	3	3535	Con 20 R	6	4¼x4¾	36.04	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	26	4	R	190	6750	32x6	32x6 D
Gramm GY	4	4345	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	P	L-N	Ful	U	4	Wis	D R	28	4	R	210	7200	34x7	34x7 D
Gramm HY	5	6545	Con 16 H	6	4¾x5¾	54.15	Pb	Zen	P	L-N	Ful	U	4	Wis	D R	25.2	4	R	236	9600	36x8	36x8 D
Gramm T-35	3	3595	Lyc T S	6	3⅞x5	36.2	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	39.6	4	R	173	7100	36x5 S	36x10 S

1929 COMMERCIAL CARS BUILT IN THE UNITED STATES

Make and Model	Capacity—tons	Chassis price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gearset	Location	No. Spds. for.	Rear Axle	Final Drive	Reduction in Low	Brakes, foot	Brakes, hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Standard Tire Sizes Rear
Gramm T-45	4	3995	Lyc T S	6	3⅞x5	36.2	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	39.6	4	R	173	7600	36x5 S	36x12 S
Gramm T-60	5	4745	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	—	4	R	173	8700	36x6 S	36x14 S
*Hahn 24	1	1345	Her C	4	4 x5	25.6	Pb	Zen	Vac	Aut	Br-L 31	U	3	Eat 1002	Sp	—	R	R	138	3100	30x5	30x5
*Hahn 34	1½	2080	Her O	4	4 x5	25.6	Pb	Zen	Vac	Aut	Br-L 31	U	3	Eat 1504	Sp	—	R	R	150	3750	32x6	32x6
Hahn 465	2	2740	Con 6 B	6	3¾x5	33.6	Pb	Zen	Vac	Aut	Br-L 35	U	4	Eat 1504	Sp	—	R	R	160½	4300	32x6	34x7
Hahn 54	2½	3300	Her L	4	4½x5¾	32.4	Pb	Zen	Vac	R B	Br-L 51	U	4	Tim 65000	Wo	—	R	R	144	5600	36x4 S	36x8 S
†Hahn 56	2½	3440	Con 6 B	6	3¾x5	33.8	Pb	Zen	Vac	Rem	Br-L 51	U	4	Eat 2252	Sp	—	R	D	160	5300	32x6	32x6 D
Hahn L	3	3600	Her L	4	4½x5¾	32.4	Pb	Zen	Vac	R B	Br-L 51	U	4	Tim 65704	Sp	—	R	R	149	5900	36x5 S	36x5 S D
Hahn 76	3½	4790	Her Y X C	6	4⅜x4¾	45.9	Pb	Zen	Vac	L-N	Br-L 51	U	4	Tim 65704	Wo	—	R	R	196	6560	34x7	34x7 D
Hahn M	4	4250	Her G	4	4¾x5¾	36.5	Pb	Zen	Vac	R B	Br-L 60	C	4	Tim 66700	Wo	—	R	R	160	7600	36x5 S	36x12 S
Hahn R	5	5100	Her G	4	4¾x5¾	36.5	Pb	Zen	Vac	R B	Br-L 60	C	4	Tim 66700	Wo	—	R	k	162	8800	36x6 S	40x6 S D
Hahn N	6	5200	Her G	4	4¾x5¾	36.4	Pb	Zen	Vac	R B	Br-L 60	C	4	Tim 66700	Wo	—	R	R	162	9200	36x6 S	40x6 S D
Indiana 200	1	1195	Wis F	6	3¼x4½	25.3	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 36000	Sp	20.71	4	Tr	137	3400	30x5	30x5
Indiana 300	1½	1475	Wis F	6	3¼x5¼	25.3	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 55001	Sp	21.26	4	Tr	149	3650	32x6	32x6
Indiana 111 X W	2	1850	Her Ox	4	4 x5	25.6	Pb	Str	Vac	Eis	Br-L 35	U	4	Wis 4611	Sp	36.60	R	Tr	120	3830	32x6	32x6 D
Indiana 400	2	2495	Wis Y	6	3⅜x5	27.3	Pb	Str	Vac	Aut	Br-L 35	U	4	Cla B 506	Sp	30.33	4	Tr	157	4800	32x6	34x7
Indiana 115 A	2½	2740	Her Ox	4	4 x5	25.6	Pb	Str	Vac	Eis	Br-L 35	U	4	Cla B 720	Sp	42.80	R	Tr	132	5000	32x6	34x7 D
Indiana 615 A	2½	3070	Wis Y	6	3⅜x5	27.3	Pb	Str	Vac	Eis	Br-L 35	U	4	Cla B 720	Sp	30.33	R	Tr	136	5190	32x6	34x7 D
Indiana 126	3	3495	Her L	4	4½x5¾	32.4	Pb	Str	Vac	Eis	Br-L 557	C	7	Tim 65704	Wo	80.7	R	Js	162½	7400	36x5	36x10 S
Indiana 127	3	3190	Her K	4	4¼x5¾	28.9	Pb	Str	Vac	Eis	Br-L 51	U	5	Cla B 720	Sp	41.72	R	R	141	6490	32x6	34x7 D
Indiana 626	3	4185	Wis H	6	4 x5	38.4	Pb	Str	Vac	Eis	Br-L 55	C	7	Tim 65704	Wo	80.7	R	Js	168½	7625	36x6 S	36x10 S
Indiana 627	3	3725	Wis H	6	4 x5	38.4	Pb	Str	Vac	Aut	Br-L 55	U	4	Cla B 720	Sp	42.80	R	R	162½	6500	36x5 S	36x10 S
Indiana 127 A W	3	3625	Her K	4	4¼x5¾	28.9	Pb	Str	Vac	Eis	Br-L 51	U	5	Wis 69311	Sp	41.72	R	Tr	141	6800	32x6	34x7 D
Indiana 627 A W	3	3925	Wis H	6	4 x5	38.4	Pb	Str	Vac	Eis	Br-L 51	U	5	Wis 69311	Sp	41.72	R	Tr	147	6800	32x6	34x7 D
Indiana 138	4	4380	Her L	4	4½x5¾	32.4	Pb	Str	Vac	Eis	Br-L 60	C	7	Tim 66700 D	Wo	83.1	R	R	162½	7850	36x5	36x12 S
Indiana 638	4	4955	Wis H	6	4 x5	38.4	Pb	Str	Vac	Eis	Br-L 60	C	7	Tim 66700 D	Wo	83.1	R	R	168½	8100	36x5	36x12 S
Indiana 41	5	5460	Her G	4	4¾x5¾	36.1	Pb	Str	Vac	Eis	Br-L 60	C	7	Tim 68700 D	Wo	95.0	R	R	172	9600	36x6	40x12 S
Int. Harvester Sp. Del.	¾	720	Wak X A	4	3½x4½	19.6	Pb	Zen	Vac	Rem	Mec	U	3	Eat 502 R	Sp	15.1	4	4	124	2200	30x5.25	30x5.25
Int. Harv. 6 Spd. Spec.	1	820	Wak X A	4	3½x4½	19.6	Pb	Zen	Vac	Rem	Mec	U	3	Eat 1124	Sp	*52.6	4	4	124	2430	30x5	30x5
Int. Harvester S-24	1¼	1160	Lyc C T	4	3¾x5	22.5	Pw	Zen	Vac	Rem	Own	U	3	Eat 1002	Sp	21.3	4	4	130	3200	30x5	30x5
Int. Harvester S-26	1¼	1310	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	Rem	Own	U	3	Eat 1002	Sp	21.3	4	4	130	3250	30x5	30x5
Int. Harvester SF-34	1½	1450	Lyc C T	4	3¾x5	22.5	Pw	Zen	Vac	Rem	Own	U	3	Eat 1502	Sp	22.6	4	4	140	3520	30x5	32x6
Int. Harvester SF-36	1½	1600	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	Rem	Own	U	3	Eat 1502	Sp	22.6	4	4	140	3570	30x5	32x6
Int. Harvester SD-44	2	1590	Lyc C T	4	3¾x5	22.5	Pw	Zen	Vac	A B	Own	U	4	Eat 2002	Sp	40.6	4	4	117	3700	30x5	32x6
Int. Harvester SD-46	2	1740	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	A B	Own	U	4	Eat 2002	Sp	40.6	4	4	117	3750	30x5	32x6
Int. Harvester SF-46	2	1950	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	Rem	Own	U	4	Eat 2002	Sp	40.6	4	4	140	4000	32x6	32x6 D
Int. Harvester 54-C	2½	3200	Own	4	4¼x5	28.9	C S	Zen	Gra	R B	Own	U	4	Own A M 428	Ch	51.8	R	D	140	6400	36x5	36x10
Int. Harvester 54	2½	3550	Own	4	4¼x5	28.9	C S	Zen	Gra	R B	Own	U	4	Eat 54 65000	D R	53.7	R	D	140	6345	36x5	36x8
Int. Harvester 74-C	3½	4550	Own	4	4¼x5	28.9	C S	Zen	Gra	R B	Own	U	4	Own A M 427	Ch	*86.0	R	D	154	8715	36x6	40x12
Int. Harvester 74	3½	4550	Own	4	4¼x5	28.9	C S	Zen	Gra	R B	Own	U	4	Eat 74 1000	D R	61.6	R	D	160	8175	36x6	40x12
Int. Harvester 104-C	5	4800	Own	4	4¼x5	28.9	C S	Zen	Gra	R B	Own	U	4	Own A M 427	Ch	86.0	R	D	154	8890	36x6	40x14
Int. Harvester HS-54	2½	3850	H-S 151	4	4¼x5½	28.9	Pb	Zen	Vac	R B	Own	U	5	Eat 54 65000	D R	60.5	4	4	*148	8000	36x5	36x12 S
Int. Harvester HS-54-C	2½	3850	do 151	4	4¼x5½	28.9	Pb	Zen	Vac	R B	Own	U	5	Own A M 428	Ch	63.8	4	4	*148	8665	34x5 S	36x12 S
Int. Harvester HS-74	3½	4850	do 152	4	4¾x5½	36.1	Pb	Zen	Vac	R B	Own	U	5	Eat 74 1000	D R	70.5	4	4	*160	10700	34x5 S	36x7 D
Int. Harvester HS-74-C	3½	4850	do 152	4	4¾x5½	36.1	Pb	Zen	Vac	R B	Own	U	5	Own A M 427	Ch	79.1	4	4	*160	11000	34x6 S	36x7 D
Int. Harv's'r NS-104-C	5	5500	do 152	4	4¾x5½	36.1	Pb	Zen	Vac	R B	Own	U	5	Own A M 427	Ch	90.5	4	4	*160	11095	34x6	36x8 D
*Larrabee 20	1	1595	Con 16 C	6	3⅜x4⅜	27.3	Pb	Zen	Gra	Rem	Br-L	U	3	Col	Sp	4.15	4	D	142	4170	30x5	30x5
*Larrabee 30	1½	1875	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Gra	Rem	Br-L	U	3	Col	Sp	4.15	4	D	161	4550	32x6	32x6
*Larrabee 40	2	2965	Con 16 R	6	4 x4⅛	38.4	Pb	Zen	Gra	Rem	Br-L	U	4	Wis	D R	5.35	4	D	176	5950	32x6	32x6 D
*Larrabee 50	2½	3285	Con 16 R	6	4 x4⅛	38.4	Pb	Zen	Gra	Rem	Br-L	U	4	Wis	D R	5.35	4	D	183	6030	32x6	32x6 D
*Larrabee 60	3	3980	Con 18 R	6	4 x4½	38.4	Pb	Zen	Gra	Rem	Br-L	U	4	Tim	Wo	5.35	4	D	195	7140	34x7	34x7 D
*Larrabee 70	3½	4600	Con 20 R	6	4⅛x4¾	40.8	Pb	Zen	Gra	Rem	Br-L	C	7	Tim	Wo	9.5	4	D	205	7740	34x7	34x7 D
Larrabee 80	5	5200	Con 21 R	6	4⅜x4¾		Pb	Zen	Gra	Rem	Br-L	C	7	Tim	Wo	—	4	D	205	9150	36x8	36x8 D
Mack BB	1½	3500	Own	4	4¼x5	28.9	P&S	Str	Vac	N E	Own	U	4	Own	Hyp.	Opt.	4	D	165½	——	32x6	32x6 D
Mack BB	1½	3600	Own	4	4¼x5	28.9	P&S	Str	Vac	N E	Own	U	4	Own	Hyp.	Opt.	4	D	177½	——	32x6	32x6 D
Mack AB	1½-2	3100	Own	4	4¼x5	28.9	P&S	Str	Gra	R B	Own	U	4	Own	Ch.	Opt.	R	D	2-Opt.	——	36x4 S	36x7 S
Mack AB	1½-2	3550	Own	4	4¼x5	28.9	P&S	Str	Gra	R B	Own	U	4	Own	D R	Opt.	R	D	2-Opt.	——	36x4 S	36x7 S
Mack AB	2½-3	3500	Own	4	4¼x5	28.9	P&S	Str	Gra	R B	Own	U	4	Own	Ch.	Op	R	D	2-Opt.	——	36x4 S	36x8 S
Mack AB	2½-3	3950	Own	4	4¼x5	28.9	P&S	Str	Gra	R B	Own	U	4	Own	D R	Opt.	R	D	2-Opt.	——	36x4 S	36x8 S
Mack BJ	3-4	5800	Own	6	4½x5½	48.6	P&S	Str	Vac	N E	Own	C	4	Own	D R	Opt.	4	D	3-Opt.	——	36x8	36x8 D
Mack AK	3½-5	5150	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	4	Js	3-Opt.	——	36x5 S	36x5 D S
Mack AK	3½-5	5250	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	C	4	Own	D R	Opt.	4	D	3-Opt.	——	36x5 S	36x5 D S
Mack AC	3½-5	4950	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	Js	R	3-Opt.	——	36x5 S	40x10 S
Mack AC	5½-7	5500	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	Js	R	3-Opt.	——	36x5 S	40x12 S
Mack AC	7½	6000	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	Js	R	3-Opt.	——	36x7 S	40x14 S
Mack AP	7½	9500	Own	6	5 x6	60.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	L	Js	191	——	36x7 S	40x8 D S
Mack AB Tractor	5-6	3500	Own	4	4½x5	28.9	P&S	Str	Gra	R B	Own	U	4	Own	Ch.	Opt.	R	D	122½	——	36x4 S	36x4 D S
Mack AK Tractor	7-10	5150	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	4	Js	128	——	34x5 S	36x5 D S
Mack AC Tractor	7-10	4950	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	Js	R	128	——	34x5 S	36x5 D S
Mack AC Tractor	11-14	5500	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	Js	R	128	——	34x6 S	36x6 D S
Mack AC Tractor	15	6000	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	Js	R	128	——	34x7 S	36x7 D S
Mack AP Tractor	15	9500	Own	6	5 x6	60.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	R	Js	191	——	34x7 S	36x7 D S
Mack AC 6-wheel	10	7500	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	4 R	Js	2-Opt.	——	36x7 S	40x12 S
Mack AP 6-wheel	10	12000	Own	6	5 x6	60.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	4 R	Js	2-Opt.	——	36x7	40x12 S
Moreland A-6	*6800	1275	Con 34 L	6	2⅞x4¾	19.84	Pb	Zen	Vac	Aut	Br-L 20	U	4	Tim 52000 H	Sp	24.17	4	D	134	3000	32x6.75	32x6.75
Moreland R R-6	*9300	1850	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	P	Aut	Br-L 35	U	4	Tim 54000 H	Sp	32.95	4	D	158½	4000	32x6	32x6
Moreland B-6	*12000	2200	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	P	Aut	Br-L 35	U	4	Tim 63721 H	Wo	34.8	4	D	*158½	4500	34x7	34x7
Moreland E-6	*15000	3600	Her W X C	6	4 x4½	38.4	Pb	Zen	P	Aut	Br-L 51	U	4	Tim 65000 H	Wo	34.8	*4	D	182	6000	34x7	34x7 D
Moreland Ex. 6	*19000	3750	Her W X C	6	4 x4½	38.4	Pb	Zen	P	Aut	Br-L 51	U	5	Tim 65704 N	Wo	46.0	*4	D	182	6500	36x4 S	36x8 S
Moreland E D -6	*23000	4900	Her W X C	6	4 x4½	38.4	Pb	Zen	P	Aut	Br-L 51	U	5	Own	Wo	52.2	*4	D	196	8500	36x8	36x8
Moreland H-6	*22000	4650	Her Y X C	6	4⅜x4¾	45.9	Pb	Zen	P	Aut	Br-L 55	C	7	Tim 66702 W	Wo	82.3	*R	D	196	8000	36x5 S	36x10 S
Moreland H D S-6	*30000	5850	Her Y X C	6	4⅜x4¾	45.9	Pb	Zen	P	Aut	Br-L 60	C	7	Own	Wo	81.6	*4	D	220	10500	36x6 S	36x8
Moreland S D-6	*34000	6450	Her YXC 2	6	4½x4¾	48.6	Pb	Zen	P	Aut	Br-L 60	C	7	Own	Wo	89.0	*4	D	221	11500	36x7 S	36x10 S
Moreland T T-6	*34000	8000	Con 15 H	6	4½x5¾	48.6	Pw	Str	P	Aut	Br-L 70	C	7	Own	Wo	98.5	*4	D	221	12500	36x7 S	36x10 S
*Fleet Arrow F A-1	1½-2	2450	Own F A	6	3½x5	29.5	Pb	Str	A P	Rem	Own	U	3	Own	Sp	33.3	4	Tr	140	3950	32x6.00	34x7
*Pierce-Arrow F A-1	1½-2	2450	Own	6	3½x5	29.4	Pw	Str	P F	Del	Own	U	3	Tim	St	21.4	4	Tr	140	4100	32x6	32x6 D
*Pierce-Arrow X A-1	2	3500	Own	4	4 x5½	25.6	Pw	Str	Pre	Del	Own	C	4	Own	Wo	44.2	D	R	150	6750	36x4	36x5 D S
*Pierce-Arrow X B-1	3	3750	Own	4	4 x5½	25.6	Pw	Str	Pre	Del	Own	C	4	Own	Wo	48.1	D	R	150	6830	36x5	36x5 D S
*Pierce-Arrow H B-1	5	4500	Own	4	4 x5½	25.6	Pw	Str	Pre	Del	Own	C	7	Own	Wo	95.0	D	R	156	8400	36x5	36x6 D S
*†PierceArrow W C-1	4	5100	Own	4	4½x6¾	32.4	Pw	Str	Pre	Del	Own	C	4	Own	Wo	41.5	D	R	162	8780	36x5	36x6 D S
*†Pierce-Arrow R D-1	5	5400	Own	4	4½x6¾	32.4	Pw	Str	Pre	Del	Own	C	4	Own	Wo	40.5	D	R	162	9440	36x6	36x7 D S
*†Pierce-Arrow R F-1	7½	5600	Own	4	4½x6¾	32.4	Pw	Str	Pre	Del	Own	C	4	Own	Wo	51.9	D	R	168	10320	36x6	40x8 D S
†Pierce-Arrow R F-T	7½	5600	Own	4	4½x6¾	32.4	Pw	Str	Pre	Del	Own	C	4	Own	Wo	51.9	D	R	132	940	36x6	36x8 D S
Relay 20 B	1	1700	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Own	Relay	25.7	4	D	142	4100	B 30x5	B 30x5
Relay S 11 B	1½	1900	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Own	Relay	30.0	4	D	162	4500	B 30x5	D B 30x5
Relay 30 A	1½	2990	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Own	Relay	34.5	4	D	168	5300	B 34x5	D B 34x5
Relay 40 A	2	3240	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Own	Relay	34.5	4	D	168	5500	B 36x6	D B 36x6
Relay 50 C	2½	4415	Bud B U S	6	4 x5⅛	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Own	Relay	58.5	4	D	175	7300	B 36x6	S 36x10
Relay 60 C	3	4480	Bud B U S	6	4 x5⅛	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Own	Relay	58.5	4	D	175	7450	B 36x6	S 36x12
Relay 70 C	3½	5250	Bud B A 6	6	4⅛x5½	40.8	Pw	Zen	Vac	Aut	Cov	C	8	Own	Relay	84.2	R	D	175	8600	B 36x6	S 40x12
Relay 80 C	4	5330	Bud B A 6	6	4⅛x5⅛	40.8	Pw	Zen	Vac	Aut	Cov	C	8	Own	Relay	84.2	R	D	175	8800	B 36x6	S 40x14
Reo B A	½	895	Con 16 E	6	3⅜x4	27.3	Pb	Sch	Vac	Rem	W-G	U	3	Sal	Sp	14.63	4	Tr	115	2290	28x5.25	28x5.25
Reo D A	1	995	Con 16 E	6	3⅜x4	27.3	Pb	Sch	Vac	Rem	W-G	U	3	Own	Sp	18.4	4	Tr	123	2755	30x5	30x5
Reo D C	1	1075	Con 16 E	6	3⅜x4	27.3	Pb	Sch	Vac	Rem	W-G	U	3	Own	Sp	18.4	4	Tr	138	2850	30x5	30x5
Reo F A	1½	1295	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	22.96	4	Tr	137	3525	32x6	32x6
Reo F E	1½	1395	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	22.96	4	Tr	152	3700	32x6	32x6
Reo F F	1½	1395	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	22.96	4	Tr	156	3750	32x6	32x6
Reo F H	2	1545	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	37.6	4	Tr	142	4165	32x6	32x6

1929 XUM

Major Specifications and Mechanical Details of 1929 Commercial Cars Built in the United States

Make and Model	Capacity—tons	Chassis price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gearset	Location	No. Spds. for.	Rear Axle	Final Drive	Reduction in Low	Brakes, foot	Brakes, hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
Reo F C	2	1595	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	37.62	4	Tr	152	4025	32x6	32x6 D
Reo F D	2	1695	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	37.62	4	Tr	168	4075	32x6	32x6 D
Reo G A	3	2035	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	41.05	4	Tr	163	4625	32x6	32x6 D
Reo G C	3	2140	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	41.05	4	Tr	179	4850	32x6	32x6 D
Reo G D	3	1985	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	46.2	4	Tr	134	4570	32x6	32x6 D
Republic Fleetmaster	*7000	1295	Lyc	6	3¼x4½		Pb	Zen	Vac	Aut	Br-L	U	4	Cla	Sp	28.3	4	Tr	144	3300	6.00x20 B	32x6
Republic F-1	*12000	2195	Lyc	6	3¼x4½		Pb	Zen	Vac	Aut	Ful	U	4	Eat	Sp	43	4	D	155	4850	32x6	32x6 D
Republic H-1	*15000	2985	Lyc	6	3⅞x5		Pb	Zen	Vac	Aut	Ful	U	4	Eat	Sp	36	4	D	163	5750	34x7	34x7 D
Republic L-1	*18000	3595	Lyc	6	3⅞x5		Pb	Zen	Vac	Aut	Ful	U	4	Eat	D R	48.0	4	D	180	6900	36x8	36x8 D
Republic M-1	*20000	3800	Waukesha	6	4 x4¾		Pb	Zen	Vac	Aut	Br-L	U	5	Eat	D R	53	D	R	171	6900	36x8	36x8 D
Rugby Model 401	1	*775	Con	4	3⅜x4¼	18.2	Pb	Til	Vac	Aut	Own	C	3	Own	Sp	14.79	4	4	107	2325f	28x4.75	28x4.75
Selden 7	¾-1	1098	Con 29 L	6	2⅞x4¾	19.6	Pb	Zen	Vac	Aut	Br-L	U	3	Tim	Sp	23.2	4	D	124	3100	30x5	30x5
Selden 17C	1-1½	1430	Con 18 E	6	3⅜x4	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	31.0	4	D	142	3750	30x5	30x5
Selden 37C	2-2½	1950	Con 15 C	6	3⅜x4⅜	27.3	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	31.0	4	D	151	4600	30x5	30x5 D
Selden 39C	2½-3	2898	Con 16 R	6	4 x4⅛	38.4	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	33.0	4	D	164	5800	32x6	32x6 D
Selden 47 CD	3½-4	3900	Con 18 R	6	4 x4½	38.4	Pb	Str	Vac	Aut	Br-L	U	4	Wis	D R	41.7	4	D	164	6900	34x7	34x7 D
Selden 67C	4- 5	4950	Con 21 R	6	4⅜x4¾	45.9	Pb	Str	Vac	Aut	Br-L	C	7	Wis	D R	95.7	4	D	164	9000	36x8	36x8 D
Selden 77B	5-7	——	Con 16 H	6	4¾x5⅝	54.1	Pb	Str	Vac	Aut	Br-L	C	7	Wis	D R	95.7	R	D	171	10000	36x8	S 36x12
Selden 47CB	3-3½	3700	Con 18 R	6	4 x4½	38.4	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	36.5	4	D	164	6700	34x7	34x7 D
Service 20 Y	1	1600	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.5	4	D	142	3900	B 30x5	B 30x5
Service S 11 Y	1½	1990	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4300	B 30x5	D B 30x5
Service 40 Z	2	3240	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4900	B 36x6	D B 36x6
Service 60 Z	3	4480	Bud B U S	6	4 x5⅛	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Tim	Wo	63.0	4	D	175	7100	S 36x5	S 36x12
Service 80 Z	4	5330	Bud B A 6	6	4⅛x5⅛	40.8	Pw	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	R	D	175	8400	S 36x6	S 36x14
Standard 2½ K	2½-3½	3200	Con K 4	4	4⅛x5¼	27.2	Pb	Str	Vac	Aut	Br-L 35	C	4	Tim 65600	Sp Wo	34.8	R	D	147	5400	36x5 S	36x8 S
Standard 3½ K	3½-5	4350	Con L 4	4	4½x5½	32.4	Pb	Str	Vac	Aut	Br-L 55	C	7	Tim 66700	Sp Wo	83.0	R	D	160	7485	36x5 S	36x12 S
Standard 5 K	5-7	5250	Con B 5	4	4¾x6	36.1	Pb	Str	Vac	Aut	Br-L 60	C	7	Tim 68700	Sp Wo	83.6	R	D	164	8700	36x6 S	40x14 S
*Stewart Buddy 21	¾	895	Lyc W S G	6	2⅞x4¾	19.8	Pb	Str	Gra	Rem	W-G	U	3	Sal	Sp	30.0	4	D	118	2694	30x5.50	30x5.50
*Stewart Buddy 21 X	1	995	Lyc W S G	6	2⅞x4¾	19.8	Pb	Str	Vac	Rem	W-G	U	3	Sal	Sp	30.0	4	D	128	2806	30x5	30x5
*Stewart 16	1¼	1295	Lyc C T	4	3¾x5	22.5	Pb	Str	Vac	Rem	Ful	U	4	Cla	Sp	24.0	4	D	130	3326	32x6	32x6
*Stewart 16 X	1¼	1295	Lyc 4 S L	6	3¼x4½	25.3	Pb	Str	Vac	Rem	Ful	U	4	Cla	Sp	24.0	4	D	130	3326	32x6	32x6
Stewart 26 X W	2	2290	Lyc T	6	3⅝x5	31.5	Pw	Str	Vac	Rem	Ful	U	4	Tim	Wo	29.0	4	D	165	5095	32x6	32x6 D
*Stewart 18 X	2½	2690	Lyc T	6	3⅝x5	31.5	Pw	Str	Vac	Rem	Ful	U	4	Tim	Wo	29.0	4	D	165	5788	32x6	32x6 D
Stewart 19 X	3½	3490	Lyc F	6	3⅞x5	36.2	Pw	Str	Vac	Rem	Ful	C	12	Tim	Wo	105.1	4	D	165	6990	36x5	36x10
*Stewart 22 X	4	4200	Lyc F	6	3⅞x5	36.2	Pw	Str	Vac	Rem	Ful	U	12	Tim	Wo	34.8	4	D	165	7990	36x5	36x12
Stewart 28 X	1½	1495	Lyc 4 S L	6	3¼x4½	25.3	Pb	Str	Vac	Rem	Ful	U	4	Cla	Sp	27.3	4	D	136	3840	30x5	30x5 D
Stewart 29 X	2	1695	Lyc 4 S L	6	3¼x4½	25.3	Pb	Str	Vac	Rem	Ful	U	4	Cla	Sp	27.3	4	D	145	4188	32x6	32x6 D
Studebaker GN-P	¾	845	Own	6	3⅜x4⅛	27.3	P C	Str	P	Rem	Own	U	3	Own	Sp	14.3	4	4	115	——	19x6.00	19x6.00
Studebaker GN-S	1	1045	Own	6	3⅜x4⅛	27.3	P C	Str	P	Rem	Own	U	3	Own	Sp	13.8	4	Js	130	——	20x6.00	30x3
Studebaker GK-N	1	1095	Own	6	3⅜x4⅛	27.3	P C	Str	P	Rem	Own	U	3	Own	Sp	13.7	4	Js	146	2830	30x5	30x5
Studebaker GN-N	1¼	1245	Own	6	3⅜x4⅛	27.3	P C	Str	P	Rem	Clark	U	4	Clark	Sp	33.5	4	Js	146	——	30x5	32x6
Studebaker 77	2½	2285	Own	8	3½x4⅜	39.2	P C	Str	P	Rem	Ful	U	3	Eat	Sp	19.8	4	Js	153	4745	20x6.75 B	20x6.75 B
Studebaker 88	3	2985	Own	8	3½x4⅜	39.2	P C	Str	P	Rem	Ful	U	3	Eat	Sp	19.8	4	Js	184	4920	20x7.50 B	20x7.50
Studebaker 99	3½	3485	Own	8	3½x4⅜	39.2	P C	Str	P	Rem	Ful	U	4	Eat	Dr	24.6	4	Js	134	5400	20x7.50 B	20x7.50
Victor 35	1½	1895	Con	6	3⅜x4	27.3	Pb	Zen	Vac	Rem	Cov	U	3	Tim	Sp	—	4	D	144	3200	30x5	30x5 D
Victor 45	2½	2495	Her	6	3¾x4½	33.7	Pb	Zen	Vac	Rem	Ful	U	4	Wis	D R	—	4	D	148	4500	32x6	32x6 D
Victor 75	3½	3895	Her	6	4 x4½	38.4	Pb	Zen	Vac	Rem	Ful	U	4	Wis	D R	—	4	D	162	6000	34x7	34x7 D
Whippet 96 A	½	380	Own 96 A	4	3⅛x4¾	15.6	Pb	Til	Vac	Aut	Own	U	3	Own	Sp	14.75	4	R	103¼	1659	28x4.75	28x4.75
Whippet 6 C-101	1½	645	Own 98 A	6	3¼x3⅞	23.4	Pb	Til	Vac	Aut	Ful	U	4	Cla-B 364	Sp	33.5	4	R	131	2540	30x5	30x5
†White 15 B	1	1545	Own G K A	4	3¾x5⅛	22.5	C S	Zen	Vac	L-N	Own	C	4	Own	Sp	18.6	R	R	133½	3242	30x5	30x5
†White 57	1¼	2725	Own G R C	4	4 x5¾	25.6	Pw	Zen	Vac	L-N	Own	U	4	Own	Sp	19.3	R	R	146	3755	32x6	32x6
†White 20 A	1½	2125	Own G K A	4	3¾x5⅛	22.5	C S	Zen	Vac	L-N	Own	C	4	Own	D R	32.1	R	R	145½	4412	34x5	34x5 D P
†White 56	2	3125	Own G R C	4	4 x5¾	25.6	Pw	Zen	Vac	Mag	Own	U	4	Own	Sp	26.2	R	D	165	5096	36x4 S	36x7 S
†White 51 A	2½	3750	Own G R B	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	Sp	35.5	R	D	170	6256	36x5 S	36x8 S
†White 55	3½	4650	Own G R B	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	I G	66.1	D	R	174	8402	36x5 S	40x5 S D
†White 52 T	3½	4700	Own G R B	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	I G	76.5	D	R	129½	8126	36x5 S	40x5 S D
†White 52	5	5100	Own G R B	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	5	Own	I G	92.3	D	R	174	9184	36x6 S	40x12 S
†*White 58	3	4400	Own G R B	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	I G	49.5	D	A	180	7400	36x5 S	36x5 S D
†White 60	1	1850	Own 2 A	6	3½x4½	29.4	Pw	Zen	Vac	Rem	Own	U	3	Own	Sp	17.9	4	D	138	3562	30x5	30x5
†White 61	1½	2450	Own 2 A	6	3½x4½	29.4	Pw	Zen	Vac	Rem	Own	U	4	Own	Sp	23.4	4	D	148	4612	30x5	30x5 D
Willys-Knight 15	1½	1545	Own K G T	6	2½x4¾	20.7	Pb	Til	Vac	Aut	Ful D U	U	3	Eat 1002	Sp	24.3	4	R	134	3300	30x5	32x6
Willys-Knight 16	1½	1595	Own K G T	6	2½x4¾	20.7	Pb	Til	Vac	Aut	Ful D U	U	3	Eat 1002	Sp	24.3	4	R	151	3400	30x5	32x6
Willys-Knight 20	2	1945	Own K G T	6	3⅜x4¾	27.3	Pw	Til	Vac	Aut	Ful D U	U	3	Eat 1504	Sp	28.4	4	R	150	3800	32x6	34x7
Willys-Knight 21	2	1995	Own K G T	6	3⅜x4¾	27.3	Pw	Til	Vac	Aut	Ful D U	U	3	Eat 1504	Sp	28.4	4	R	164	3900	32x6	34x7
Willys-Knight 25	2½	2545	Own K G T	6	3⅜x4¾	27.3	Pw	Til	Vac	Aut	Ful G U	U	4	Wis 6617 B	D R	30.3	4	R	150	4920	32x6	32x6 D
Willys-Knight 26	2½	2595	Own K G T	6	3⅜x4¾	27.3	Pw	Til	Vac	Aut	Ful G U	U	4	Wis 6617 B	D R	30.3	4	R	164	5020	32x6	32x6 D

GENERAL NOTATIONS

*†**REFERENCE MARKS** apply to individual lines only and explanations are given under the subdivision for each company in the "SPECIAL NOTATIONS."

CAPACITIES given in this table are in tons of fractions of tons. *Shows maximum allowable gross weight.

TIRE EQUIPMENT where not otherwise indicated is solid.

WHEEL BASES given are standard, but optional wheel bases are available in many cases.

ENGINE—Bud, Buda; Con, Continental; Her, Hercules; Kgt, Knight; Lyc, Lycoming; Wak, Waukesha; Wis, Wisconsin.

LUBRICATION—Pb, pressure lubrication to main and connecting rod bearings; Pw, full pressure lubrication to all bearings, including wrist-pins; P&S, pressure with splash; CS, circulating splash; Sp, Splash.

CARBURETOR—Car, Carter; Hol, Holley; Joh, Johnson; Mar, Marvel; Sch, Wheeler-Schebler; Str, Stromberg; Stw, Detroit lubricator; Til, Tillotson; Zen, Zenith-Detroit.

FUEL FEED—Gra, Gravity; Pre, Pressure-Vac, Vacuum tank; P, Fuel pump; Auto-P, Auto pulse; E, Electric pump.

IGNITION — AB, American-Bosch; Aut, Electric Auto-Lite; Apo, Apollo; Del, Dayton Engine Laboratory; Eis, Eisemann; L-N, Leece-Neville; N-E, North East; RB, Robert Bosch; Rem, Delco-Remy; Spf, Splitdorf.

TRANSMISSION—Br L, Brown-Lipe; Cov, Covert; Ful, Fuller; Mec, Mechanics Machine; Mun, Muncie; W-G Warner Gear.

LOCATION—C, Center, Amid; U, in unit with engine; J, Jackshaft.

REAR AXLE—Cla, Clark Equipment; Col, Columbia; Eat, Eaton; Sal, Salisbury; Tim, Timken; Wis, Wisconsin.

FINAL DRIVE—St, Straight bevel; Sp, Spiral bevel; We, Worm; DR Double Reduction; Ch, Chain; IG, Internal Gear.

BRAKES—Je, Jackshaft; R, Rear wheels; D, Drive shaft; 4 Four-wheel; Tr, Transmission; W, Westinghouse air brake.

TIRES—B, Balloon; D, Dual; S, Solid.

SPECIAL NOTATIONS

AMERICAN-LA FRANCE

*Chief model also available as 2½-ton model, 24x7 tire, dual rear, weight 6,400. Price $3,900.

AUTOCAR

†Engines in these models are located under the driver's seat.

DURANT LINE

*Price includes panel body.

GENERAL MOTORS TRUCK LINE

*Capacity given in all cases is maximum allowable total gross weight (straight rating), and includes chassis, cab, equipment, body and load.

Model T-19 is also available in three other types, with 145¾-inch wheel base having same straight ratings and standard tire combinations as listed for the 127¾-inch wheel base types shown in the table.

Model T-30 is also available in six other types, with 152 and 164 inch wheel bases, respectively, having same straight ratings and standard tire combinations as listed for the 136-inch wheel base types shown in the table.

Model T-42 is also available in nine other types, with 152, 164 and 175 inch wheel bases, respectively, having same straight ratings and standard tire combinations as listed for the 136-inch wheel base types shown in the table.

Model T-60 is also available in nine other types, with 160, 180 and 200 inch wheel bases, respectively, having same straight ratings and standard tire combinations as listed for the 140-inch wheel base types shown in the table.

Optional rear axle gear ratios are available for all types and optional tire equipment is available for all types except Model T-11-1001.

FLEET-ARROW LINE

*Model F. A. 1 is also available as Model F. A. 2, at $2,500 on wheel base of 160 inches, weight 3,975 lbs., and as Model F. A. 3, at $2,550, with seven speed transmission, on 180-inch wheelbase, weight, 3,985 lbs.

GRAMM

*Models B, C, D and E are furnished in three wheel base lengths—others on request.

*Model T Series—Larger engines, pneumatic tires and special wheel bases, and 8 speed transmissions—optional at extra cost.

Model "GY"—190 and 210 in. wheel bases.
Model "HY"—210 and 236 in. wheel bases.

*Model "HY"—210 and 236 in. wheel bases. Tire sizes and electrical equipment optional, depending upon type of service—Coach or Van.

*Above models are all built in tractor wheel base lengths for semi-trailer use.

HAHN LINE

*Model 22 also available as Model 24, priced $1,495, on 144-inch wheel base, with Buda H. S. engine, 6 cyl. 3⅜x4½ inches rated 27.3 h.p., weight 3,200 lbs.

*Model 34 also available as Model 36, with Buda H. S. 6 engine (described above), weight 3,850 lbs.

*Model 44 also available as Model 46, priced $2,410, on 156-inch wheel base, with Buda H. S. 6 engine, as in Model 26, weight 4,200 lbs.

*Model 56 also available on 171-inch wheel base.

INTERNATIONAL HARVESTER LINE

*Model HS-54 also available in the following wheel bases, 130-inch tractor, 170, 185 and 200-inch.

*Model HS-54-C also available in the following wheel bases, 130-inch tractor, 170, 185 and 200-inch.

†Frame is reinforced with inserted channels in each side rail, extending from dash to rear end.

*Model HS-74 also available in the following wheel bases, 144-inch tractor, 185, 210 and 235-inch.

*Models HS-74-C and HS-104-C also available in the following wheel bases, 145-inch tractor, 185, 210 and 225-inch.

All Model H9 heavy-duty International truck models are equipped with built-in vibration dampered clutches.

LARRABEE

*Note—Bevel gear, worm or double reduction drive rear axle available in models 40 and 50. Bevel or double reduction axles available in 30. Worm axles in 60, 70 and 80. Three or more wheel bases in each model. All Larrabee models have hydraulic brakes: 40 up have vacuum booster.

MACK LINE

Other wheelbases furnished on all truck models.

On 6-wheel jobs, 4 rear wheels driven by chains, foot brake on 4 rear wheels.

Hyp.—Hypoid drive, single reduction.

PIERCE-ARROW LINE

*Model FA1 also available as Model FA2, at $2,550 on 160-inch wheel base, weight 4,150 lbs., and also as Model FA3, at $2,250 on 180-inch wheel base, weight 4,200 lbs.

*Model XA1 also available as Model XA2, at $3,550 on 162-inch wheel base weight 6,800 lbs.

*Model XB1 is also available as Model XB2, at $3,900 on 180-inch wheel base, weight 6,900 lbs.

*Model HB1 is also available as Model HB2, at $4,550 on 180-inch wheel base, weight 8,500 lbs., and also as Model HB3, at $4,600 on 198-inch wheel base, weight 8,700 lbs.

*Model WC1 is also available as Model WC2, at $5,150 on 180-inch wheel base, weight 8,950 lbs., and also as Model WC3, at $5,250 on 198-inch wheel base weight 9,050 lbs.

*Model RD1 is also available as Model RD2, at $5,450 on 180-inch wheel base, weight 9,650 lbs., and also as Model RD3, at $5,500 on 198-inch wheel base, weight 9,750 lbs.

*Model RF1 is also available as Model RF2, at $5,650 on 204-inch wheel base, weight 10,500 lbs.

†Seven-speed transmission also available.

REPUBLIC LINE

*Model 75-4 also available as Model 75-6, priced $1,495, on 128-inch wheel base, with Lycoming 48L engine, 6-cyl. 3¼ by 4½ inches, rated 25.3 h.p., weight 3,150 lbs.

*Model 76-4, also available as Model 76-6, priced $1,675, on 150-inch wheel base, with Lycoming 48L engine, as in Model 75-6, weight 3,500 lbs.

†Model 60-61, also available with four-wheel brakes, $3,155.

**Model 62, same as 60-61, on 171-inch wheel base, $3,040.

†Model 25W-25WRB available with four brakes.

**Model 65, same as 65, on 200-inch wheel base, $3,750.

**Model 25W, 25WB and 25WBR also available in 3½-ton capacities as Models S25W, S25WB and S25WRB on wheel bases of 165, 156 and 124 inches, priced $2,695.

**Models 35 and 35R also available in 5-ton capacities on wheel bases of 170 and 167 inches, priced $5,145.

**Model 85 also available as Model 86 on 170-inch wheel base, price $2,150.

**Model 50-51 also available as Model 53 on 170 inch wheel base.

REO LINE

*Tonner in wheel base 123, 138; 1½-ton in wheel base, 137, 156, 162; 2-ton in wheel base, 162, 168; 3-ton in wheel base, 168 179, 184.

RUGBY

F—Chassis weight includes body.

STEWART LINE

*Buddy 1-ton can be supplied in 138-inch wheel base.

*Models 16 and 16X can be supplied in 145-inch and 160-inch wheel base.

Model 28X can be supplied in 146, 160 and 176 inch wheel base.

Model 29X can be supplied in 160 and 176 inch wheel base.

*Model 26XW can be supplied in 143, 176 and 190 inch wheel base.

*Model 18X can be supplied in 148, 190 and 220 inch wheel base.

*Models 19X and 22X can be supplied in 148, 172, 190, 220 and 235 inch wheel base.

WHITE LINE

*Bus Model 58 is equipped with Booster Brakes and 50B and 54 with air brakes. Model 58 with air brakes as optional equipment.

Model 60 gross weight capacity, with 32x6 tires 8,000 lbs.; 34x7.50 balloon tires optional at extra cost.

†Supplied in optional wheel bases.

FORD LINE

*Low speed axle 22.6 to 1.

DISTRIBUTION
SHOP EQUIPMENT
REPLACEMENTS

WHOLESALE

MERCHANDISING
ACCESSORIES
EQUIPMENT

Distributor Opens Station in Boston

Lenk Electric Co. Will Also Operate as "Super Service"

By F. N. HOLLINGSWORTH

BOSTON, MASS., Sept. 5.—A new super-service station at 1305 Boylston St. has just been put into operation by the Lenk Electric Company, distributor, which has been located at 1088-1094 Boylston St., for the past seventeen years.

The new station, built in L shape, is one story high, with daylight on all sides, and contains about 10,000 square feet of floor space. Here is a sunshine super service plant, where the company is thoroughly equipped to handle repair work of all makes of starting, lighting and ignition apparatus, carburetors and brakes.

O. C. Lenk

In addition, it deals in various lines of accessories and is authorized distributor for the Eismann magneto, the Owen dyneto, the Eclipse Machine Company, the Webster Electric Company, Slade brake linings, the Craver oiler, the United Motor Service and Delco, Klaxon and Remy products.

The firm, headed by Oscar C. Lenk, president and general manager, has hooked up with the best service stations throughout New England, acting as distributor for the above products, for ammeters, automotive testing equipment, ball-bearing battery testers, Bendix valves, brushes, cable, AC spark plugs, terminals, cutouts, Everready Mazda bulbs, friction tape, horns, horn buttons, hydrometers, lamp connections, the Rajah terminals and resistance units. It also carries a large stock of repair parts for all makes of magnetos, generators and starters.

In dealing with service stations throughout New England, it is constantly experimenting with new as well as well-known products and passes on to the others the results of experiments. Since moving to the new station, the company has instituted a brake lining department owing to the fact that it has had so many calls for this work. It also has a brake testing room, where brakes are tested free, using the Bean brake tester.

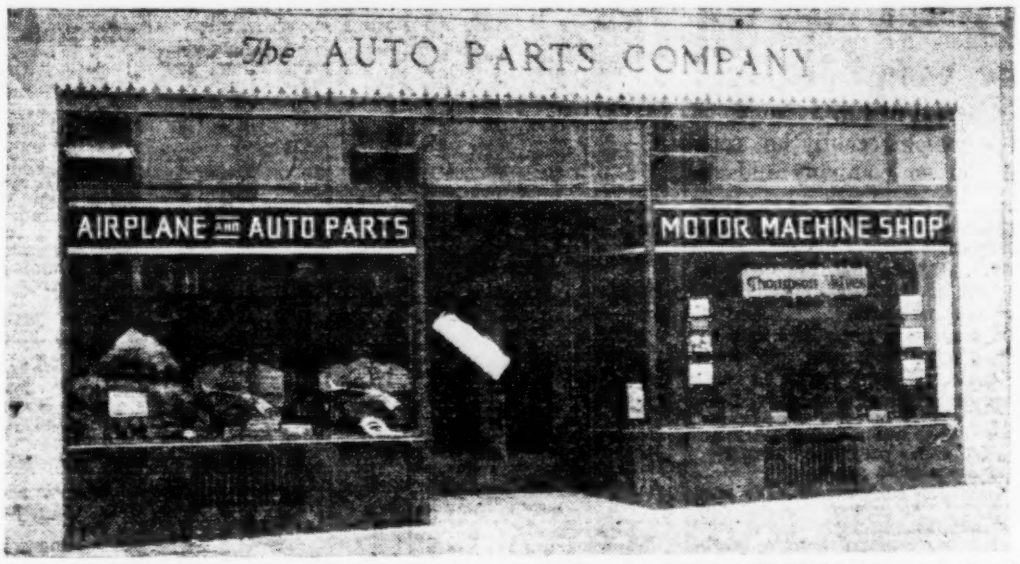
The new station is ideally located for its purpose. Twenty cars can be handled at one time, and a variety of work carried out on each simultaneously. The station has a large yard space, and owners can drive in from a privately owned street, 100 feet long by forty-five feet wide, without any necessity for curb parking and with plenty of room for turning after the work is done. the station is only two miles from City Hall and the heart of Boston, so that it is very accessible, and yet in the midst of a fast growing new automobile district. Because of its layout, in "L" shape, with the extra yard space and private street, the employees are able to do much of their work outdoors, givng daylight service until cold weather comes. After that they can work under a number of skylights or beside large windows, in a warm, steam-heated building.

Besides the brake lining and brake testing room, there is an electrical room equipped with electrical power machines and the latest labor saving tools, a machine shop, a carburetor testing room, a boiler room and a large basement used for storing reserve stock. Stock on the sales floor is kept in steel cabinets, thoroughly sorted and labeled, so that no time is lost in finding any part desired.

All employees have been with the company for years, it being the policy of the management to keep its men the year round and avoid labor turnover.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

Auto Parts Co. i n New Location



THIS NEW BUILDING of the Auto Parts Company of Reading, Pa., houses a $60,000 inventory and one of the most completely equipped machine shops in that part of the country. Metal counter and bin construction is used throughout, and it is laid out very effectively, so as to display the merchandise at an advantage.

LEWIS-SHEPARD BUYS MANUFACTURING PLANT IN CRAWFORDSVILLE

Crawfordsville, Ind., Sept. 5.—The Lewis-Shepard Company of Watertown, Mass., announces the purchase of a brick manufacturing building containing approximately 60,000 square feet of floor space.

It will operate the branch factory here in order to serve customers west of Cleveland. It is expected that production will be well organized by October 1.

The Lewis-Shepard Company has increased its sales over 300 per cent. in the last seven years. With the new addition the company is now using approximately fourteen times the floor area it required ten years ago.

In the beginning the Crawfordsville plant will manufacture chiefly skid platforms for lift trucks and storage racks for use with portable elevators. The production of lift trucks and stackers will undoubtedly be added to the Crawfordsville production schedule as fast as possible.

SERVICE GARAGE CO. OPENS IN THOMASVILLE

Thomasville, Ga., Sept. 5.—The Service Garage Company formally opened its doors to the public here September 2 in the building formally occupied by the T. E. Amson Auto Company at Clay and Madison Streets. G. F. Mueller, T. G. Floyd and E. C. Hicks comprise the firm. Each of the men named, for the past four years has been connected with the Thomasville Sales Company, and the Amson Auto Company and are well known throughout the state. The building has been completely remodeled and twenty-four-hour service will be given.

NIACET CHEMICAL TO BUILD IN NIAGARA FALLS

Niagara Falls, N. Y., Sept. 5.—The Niacet Chemical Corporation, Niagara Falls, has an expansion project under way which calls for construction of several new additions to the main plant, which will be used for manufacturing purposes. Production at the plant which manufactures acetic acid used in the making of ethelacetate, a lacquer solvent, will be doubled. The demand for the solvent for automobile finish is growing rapidly, as only three or four firms in this country make the product, according to Waldo C. Hovey, general manager of the firm. The buildings will be of brick and steel, and will greatly increase the total valuation of the firm's property.

ALBANY SERVICE STATION BUILT BY L. R. MACK, INC.

Albany, N. Y., Sept. 5.—A mammoth new plant is now under construction at Albany by L. R. Mack, Inc., which will be completed late in the fall. The structure will be one story high, 300 feet long and 150 feet wide. The new building will be used as a service station as well as a storage plant, and is being built to permit further expansion.

CHEVROLET CO.'S NEW PLANT TO OPEN IN JANUARY

Tarrytown, N. Y., Sept. 5.—Construction work on the new plant of the Chevrolet Motor Company in this city is progressing, with contractors expecting to have the building ready in January. The new factory will be used in assembling cars for export, and will be 1,200 feet long and 400 feet wide, of concrete fill foundation, steel framework and brick walls. Several hundred men are being employed on the project, which is under the direction of the John W. Cooper Company. A large increase in production and operating schedules will be effected when the new structure is ready.

ALBANY EMPLOYMENT INCREASES IN AUGUST

Albany, N. Y., Sept. 5.—The State Labor Department in its monthly bulletin reports an employment gain in the automobile parts and electrical apparatus plants of about 4 per cent., with resultant increased production. The pig iron, aluminum and steel producing mills also reported greater activity, with almost the same personnel. August marked the fifth month that the volume of workers has climbed up since a small recession in January.

GARAGE SOLD AT AUCTION

Shelbyville, Ky., Sept. 5.—The Fullenwider service station in this city, on North 7th Street, and the garage at 8th and Main Streets were sold at auction this week to Joseph Bell for $22,600.

FORD RADIATOR PLANT ESTABLISHES NEW OUTPUT RECORD: 400 PER HOUR

Cohoes, N. Y., Sept. 5.—The Ford Motor Company is continuing expansion of its Green Island plant, and preparations are now under way for both increased production and employment. Approximately 2,600 hands are now employed, and it is predicted that by January 1 the working force will reach 3,000. Radiator production leads activities at the plant, and the department is scheduled for further expansion. During the past week a new record in radiator production was made, when 400 radiators were turned out in one hour. A new high-production mark was also established for twenty-four hours, when 6,002 radiators were turned out.

It is estimated by officials of the plant that in the first seven months of production this year almost a million radiators have been manufactured. Virtually the entire radiator output of the Ford Motor Company is taking place just now at the Green Island plant, and production is also rapidly mounting in the other departments. In addition to radiators, production is being concentrated in manufacture of springs, spokes, axles and radius rods.

Nashville, Tenn., Sept. 5.—H. J. Harrah, manager of the Western Auto Supply Company here, is enjoying his vacation on a two weeks' motor trip through Missouri. Mr. Harrah is accompanied by his family.

Editor's Column

DESPITE conditions that are more or less local in various parts of the country, the jobbing business this year will emerge once more at the top, and that in the face of the fact that car manufacturers have taken away practically all of the accessory business by equipping cars complete.

The wide-awake jobber will find at the close of 1929 that his profits and volume will be ahead of 1928. The loss of accessory business will be made up in equipment sales, while parts service will also show an increase. The only drawbacks appear to be hand-to-mouth buying and slow collections.

But there is one consolation to be derived from the hand-to-mouth buying, and that is that the dealers, by buying in small quantities, cannot owe the jobber the large amounts as in previous years. That is, the jobber does not have to carry at one time the huge burden as in the past.

True, the stock that originally was cleared to the dealer is on the shelves and in the stock rooms, but in the event of fires or failures it is an asset and not a liability.

* * *

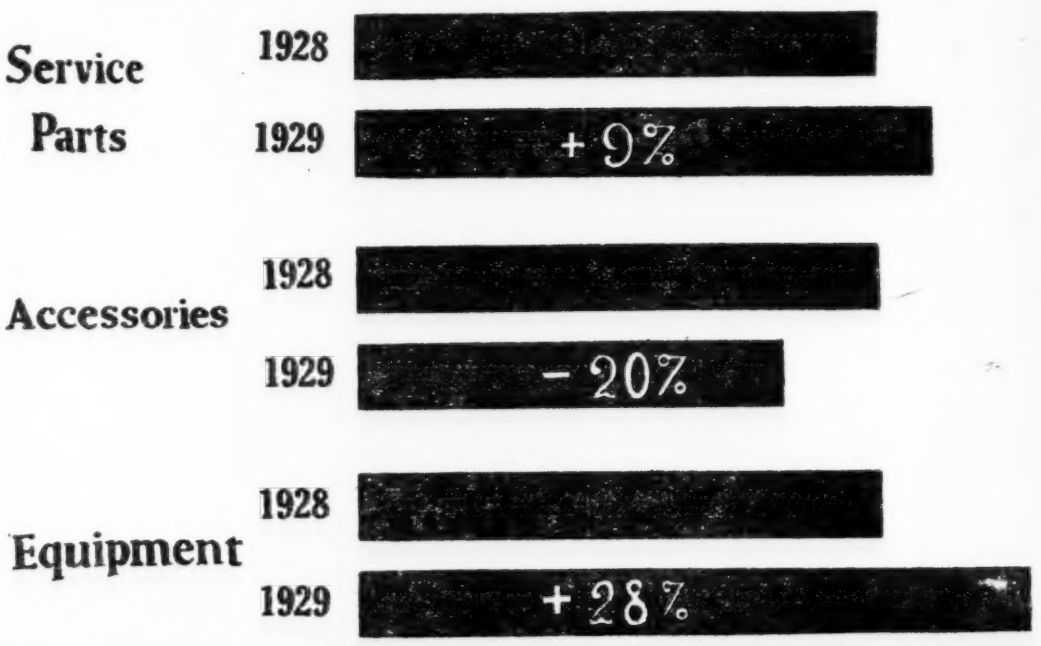
THE increase in the sale of new cars in the first quarter, coupled with the glowing reports that dealers are able to sell their used cars, has been a big aid to the jobbers, for with more cars on the road there has been a bigger demand for shop equipment, parts and service.

While the jobbers will find their volume tremendously increased, it is also certain that their profits will not be as large as in past years, and this is due to the hand-to-mouth buying and the slow collections which eat into the profits.

Many jobbers are opening branches with retail departments in an effort to move their stocks quicker than they have been able to in the past year through accessory dealers, service stations and garages. In some sections of the East jobbing concerns are opening service stations.

Lancaster, Ky., Sept. 5.—The foundation for the new Ford garage in this city has been laid and the brick work will start in a few days. The Lancaster Motor Company, of which Nick Sanders is general manager, has let the contract to Louis Hardin of Madison county and the building will be completed in a short time. It will be one of the most modern and complete garages in the city. The company will operate a service station, handle all the Ford products and will be up to date in every particular.

Trend of Jobber Business Shown by Chart



THE ABOVE CHART, the result of a nation-wide survey conducted by The Automotive Daily News during the first half of 1929, shows that equipment sales gained sufficiently to offset the decrease in accessories sales. Sales of service parts showed a nominal increase over the first six months of 1928.

Financial News of the Automotive Industry

The A. D. N. Analyst Looks Them Over

FEDERAL SCREW WORKS

THE current year is proving a period of large expansion for the Federal Screw Works, which recently has completed two new plants, acquired another company and entered the aviation industry.

Earnings are keeping up with this general expansion, the net profit for the first six months amounting to $540,515 after depreciation and Federal taxes, equivalent to $3.77 a share on 143,500 shares, the outstanding capital stock, as compared with $194,688, or $1.85 a share on 105,000 shares of stock, in the corresponding period of last year.

Making this gain in earnings this year more impressive is the fact that the net profit in 1928 showed a big expansion over the preceding year, the total of $340,603 comparing with $172,729 in the year preceding. The first real gain in net profit came in 1927, the $172,000 earned that year comparing with $90,941 in 1926. The company has made rapid progress during the past few years of marked prosperity in the automotive industry and, under progressive management, has kept pace with the growth of industry in general.

The company's productive capacity has been continuously increased to meet the needs of the automobile industry. At present the company serves a number of the leaders in this field, among their largest customers being Buick, Chrysler, Ford, Hudson, General Motors, Nash, Oakland, Packard, Reo, Studebaker and Willys-Overland. Well known industrial organizations such as Detroit Edison, Shapleigh Hardware, Standard Oil Company of New Jersey and Youngstown Sheet and Tube are also large customers of the Federal Screw Works and its subsidiary organization.

The new plants of the company are at Detroit and Chelsea, Mich., and it is expected with them in operation the activities of the company will be increased by at least 40 per cent. The Lansing division of the company has started on the manufacture of the four-cylinder Rover airplane engine. The other item under the recent expansion program is the acquisition of the Superior Screw and Bolt Company, which will add considerable strength to Federal's position in its field.

This acquisition was the third to be made in the past year. The company bought the Chelsea Screw Company last December on a basis of 2.8 shares of Federal and $6 in cash for each Chelsea share, and January of this year, Federal bought control of the Michigan Screw Company by exchange of stock on the basis of one share of Federal for each 4.2856 shares of Michigan Screw.

Federal Screw was incorporated in 1919 as a successor to a business which was started in 1917 as a partnership. Output of the company includes various automotive screw machine products, nuts bolts, screws, etc., extensively used in the automotive industry. As of last December the capacity of the plants was 6,500,000 assorted screw machine products weekly.

The authorized capital of the company consists of 200,000 shares of no par stock, of which 143,500 shares are outstanding. In connection with the purchase of Superior Screw and Bolt, the company is issuing $2,000,000 in convertible 6½ per cent. ten-year notes. Upon completion of this deal the company will have a $2,000,000 funded debt and the outstanding shares of capital stock will be 159,000. The stock is listed on the Detroit and Chicago Stock Exchanges and the New York Curb Market, where it is selling at around $74 a share.

Common stock to the amount of 183,000 shares has been approved for listing on the Chicago Stock Exchange by the board of governors of the exchange. Of this total 143,500 shares have been admitted to immediate trading, and an additional 15,500 shares will be admitted to trading upon issuance in connection with the acquisition of an additional property by the company.

Simultaneously with the listing of the stock on the Chicago Stock Exchange it was announced by the Federal Screw Works that the financing of this new addition has been underwritten, and will be publicly offered shortly by Folds, Buck & Co.; Samuel Ungerleider & Co., and Bauer, Pogue, Pond & Vivian.

The financial condition of the company is strong. The balance sheet for March 31, 1929, showed total current assets of $1,278,709, as compared with total current liabilities of $418,881, leaving an indicated net working capital of $859,828. The cash item was $113,306, with accounts receivable amounting to $662,465. The book value of the stock was shown as $13.06 a share, as compared with $7.14 as of December 31, 1928, a wide appreciation in three months.

Officers of the company were recently reported as follows: D. S. B. L. Maas, secretary and treasurer. Directors are the foregoing officers B. L. Maas, secretary and treasurer. Directors are the foregoing officers and J. S. Rubiner, J. G. Hall and L. R. Stark.

The company's fiscal year conforms to the calendar and the annual meeting is held on the second Tuesday in January.

Following is the balance sheet for March 31, 1929, compared with that for December 31, 1928:—

ASSETS

	Mar. 31,'29	Dec. 31,'28
Land	$102,388	$65,000
†Buildings, equipment, etc. (less depreciation)	904,869	296,700
Investments	27,645	.....
Prepayments	5,795	.....
Other assets	.....	170,780
Current assets:—		
Cash	113,306	225,516
Accounts receivable	662,465	178,869
Inventories	502,938	113,980
Total current assets	$1,278,709	$518,365
Total assets	$2,319,406	$1,050,845

LIABILITIES

‡Capital stock	$1,427,516	$856,352
Surplus	446,155	
Contracts payable	26,854	27,935
Current liabilities:—		
Notes payable	50,000	.....
Accounts payable	319,458	120,584
Accruals	.....	5,148
Tax reserve	49,423	40,826
Total current liabilities	$418,881	$166,558
Total liabilities	$2,319,406	$1,050,845
*Net working capital	$859,828	$351,807

*Based on current assets and current liabilities as above.

†Depreciation reserve amounted to $642,177 on March 30, 1929, and to $202,898 on December 31, 1928.

‡Represented by 143,500 shares in 1929 and by 120,000 shares in 1928, both of no par value.

Range of Automotive Stocks

NEW YORK CURB EXCHANGE

Sales		High	Low	Close	Net ch'ge
3100	Budd Ed	26	25⅛	25⅜	— ⅝
	Caterpillar T	No sales today			
2400	Checker Cab	69⅝	68	68	—1
37700	Cities Service	53¼	52⅞	53⅛	+ ⅜
700	do pf	94¾	94½	94¾	+ ⅛
100	C. Dia.-Fibre	36¾	36¾	36¾	....
35600	Cord Corp	36	34¾	35	— ⅝
3100	Doehler D. C.	38	38	38	....
500	Durant Motor	9⅛	8⅝	9	....
1500	Fageol Motor	5¼	5	5¼	+ ¼
100	Fedders	31	31	31	+ 1
	Federal Mogul	No sales today			
5100	Flat	25¾	25½	25⅝	— ⅛
100	Firestone	240¼	240¼	240¼	— ¾
	do pf	No sales today			
4100	Ford, Canada	42	39¼	41½	+ 1⅞
4100	Ford Ltd	18½	18⅛	18⅛	— ⅛
35	Franklin Mfg	91⅜	91⅜	91⅜	+ ⅜
	Gen. T. & R	No sales today			
400	Green. T. & D	23¼	22	23¼	+ 2⅛
	Hall Lamp	No sales today			
	Henney	No sales today			
	Hood Rubber	No sales today			
	India Tire	No sales today			
	Isotta Fras	No sales today			
	Jaeger	No sales today			
300	Lakey	21	20⅛	20⅛	— ⅝
	McQuay-Norris	No sales today			
100	Midland Steel	120	120	120	—3½
200	Nat. Rub. Ma	31⅛	31	31	— ⅛
500	Para. Cab	23½	22½	23⅛	....
300	Perfect Circle	59⅛	59	59	—1¼
	Pines Wint'Ft	No sales today			
	Pitts. Pl. Glass	No sales today			
200	Raybestos	121	120	121	+ ⅝
	Rolls-R. Amer	No sales today			
	Ross Gear	No sales today			
	Safe-T-Stat	No sales today			
	Selberling	No sales today			
	Sparks With	No sales today			
200	Stutz Motor	13⅜	13¼	13⅜	— ⅛
2100	Thermoid Co	33⅛	32½	32⅞	....
600	Thomp. Pr. A	54½	54⅛	54⅛	— ½
300	Triplex	14⅛	14	14	—1
	U. S. Asbestos	No sales today			
	Watson, J. W	No sales today			
400	Wayne Pump	20	19⅞	20	....
300	West Auto	70	69	69	—1
	Yel. Taxi N. Y.	No sales today			

NEW YORK OVER THE COUNTER

Div.		Bid	Asked
6	Am Hard Rubber	75	78
10	Dixon (J) Crucible	170	175
3 50	Doehler D C	40	46
7	do pf	116	....
....	Eisemann Magneto	31	36
7	do pf	95	100
....	Manhattan Rubber	58	....
....	Rolls Royce Am	17	21
....	do pf	48	55
1.20	Smith (A O)	240	250
....	Splitdorf Beth E	6¾	7½
2	Ward La France Tr Co A	33	35

CHICAGO STOCK EXCHANGE

Sales		High	Low	Last
200	Acme Steel	136	134	136
1050	Allied Motor Ind	47½	46¾	47
300	Allied Products	65	64¼	64¼
350	Auburn Auto	496	480	480
6750	Bendix Aviation	95	92	92
9400	Borg Warner	86	83¾	83¾
200	Chain Belt	50	50	50
50	Chicago Yellow Cab	29⅞	29⅞	29⅞
30050	Cord Corp	36	34⅞	35¼
150	Houdaille Hershey A	44¾	44	44
450	do B	44	43½	44
100	La Salle Exten	3¼	3¼	3¼
50	McCord Rd A	41	41	41
150	Modine	70	69	70
550	Muncie Gear A	22¾	21	21
4800	do B	12¾	10	11
400	Muskegon M S	27¾	26¾	27⅜
350	Nachmann Spring	56½	56	56½
300	Noblitt Spark	54¾	54	54½
900	Pines W P	82¾	80	82
200	Ross Gear	44	44	44
150	Van Sicklen	27	27	27
50	Warchel pf	32	32	32
50	Wayne Pump pf	35	35	35

CLEVELAND STOCK EXCHANGE

Sales		High	Low	Last
325	Apex Electric	35¾	33	35¾
30	Firestone 6s pf	109½	109½	109½
30	do 7s pf	108½	107⅞	107⅞
50	General Tire	265	265	265
100	Geometric Stamping	33½	33½	33½
50	Otis Steel	49½	49½	49½
40	P B Stearns	2	2	2

DETROIT STOCK EXCHANGE

Sales		High	Low	Last
400	Detroit Motor Bus	7⅛	7	7⅛
100	Federal Mogul	22	22	22
100	Federal Screw	72	72	72
300	Federal Motor Truck	13½	13½	13½
131	G R Metal	12	12	12
100	Hall Lamp	22⅜	22⅜	22⅜
3285	Packard new	30⅜	29⅞	30¼
4945	Timken Axle	30½	29¾	30
190	Universal Products	35½	35½	35½
390	Wilcox Rich B	45	44½	44½

Chicago, Sept. 5.—Public offering will be made tomorrow by A. G. Becker & Co. and J. A. Sisto & Co. of 50,000 shares of no-par common stock of Chicago Pneumatic Tool Company at $43 a share. This offering does not represent any new financing on the part of the company.

Rubber Prices

RUBBER EXCHANGE OF NEW YORK

	High	Low	Close	Prev close
September	20.00	19.90	19.80a19.90	19.60
October	....	....	†20.20	20.00
November	....	....	20.50a20.70	20.40
December	21.00	20.90	†20.90	20.80
January	21.30	21.10	21.00a21.20	21.00
February	....	....	*21.30	21.20
March	21.60	21.50	21.50a21.60	21.30
April	....	....	*21.70	21.50
May	22.00	21.90	21.80a21.90	21.70
June	....	....	*22.00	21.90
July	....	....	*22.20	22.10
August	....	....	*22.40	22.30
Spot	....	....	*19.80	19.70
Sales, lots			349	167

Market closed steady.

*Nominal. †Trading. ‡Bid.

OUTSIDE CLOSING PRICES

(Per pound, delivered New York)

Plantation—	Bid	Asked
Ribbed smoked sheets, spot	20¼	20⅜
September	20¼	20⅜
October	20⅜	20⅝
October-December	20¾	21
January-March	21¼	21½
April-June	21¾	22
*Spot—		
First latex	20½	20¾
Thin pale latex	21	21⅜
Clean thin brown crepe	17¼	17⅜
†Specky crepe	17	17⅜
Rolled brown crepe	12½	12¾
No. 2 amber	17⅜	17⅝
No. 3 amber	17¼	17⅜
No. 4 amber	17	17⅜
*Paras—		
Up-river, fine, spot	21	21¼
do coarse	11½	*...
Accra, fine, spot	21½	21¾
Caucho, Ball—Upper	11½	*...
Centrals—		
*Esmeraldas	11½	12
*Central scrap	11½	12
Guayule, washed and dried	....	19
†Balata—		
*Block Ciudad	54	..
*Surinam sheet	56	..
*Manaos block	55	..
Peruvian block	21	22

SCRAP RUBBER

(Dealers' buying prices, f. o. b., New York)

Boots and shoes, black, ton	$18.00	a20.00
Arctics, cwt	.50	a .60
Inner tubes, mixed, cwt	4.00	a 4.12½
Inner tubes, red, cwt	4.37½	a 4.50
Tires, standard, mixed, ton	18.00	a19.00
Inner tubes, No. 1, cwt	7.12½	a 7.37½
Inner tubes, No. 2, cwt	3.75	a 3.87½
Mixed hose, soft, cwt	.50	a .55
Hose, air brake, ton	18.00	a20.00

*Nominal. †Sold on sample only.

WEDNESDAY, SEPTEMBER 4

NEW YORK STOCK EXCHANGE

Previous 1929 High	Previous 1929 Low	Div.		Sales	High	Low	Close	Net Change
104⅞	27	....	Advance Rumely	600	30½	29½	29½	+ ⅛
119	40	....	do pf	400	40¼	40¼	40¼	— ⅞
217	95⅛	3	Air Reduction	800	215	212	213⅝	— 2⅜
11¼	4	....	Ajax Rubber	1,500	4⅜	4⅜	4⅜	— ⅛
330	166	7	Allis Chalmers	100	312½	312½	312½	— 3
73¼	40⅛	....	Am. Bosch Magneto	5,500	67⅜	66½	67	+ ⅛
86	70¼	7	Amer. Chain pf	300	84	82	84	+ 2¼
8⅞	4⅛	....	Am.-La France		No sales today			
500	221	4	Auburn	800	496	478	478	—19
104⅜	78	2	Bendix Aviation	13,500	94⅞	92⅛	92⅜	— 2½
136¾	110¼	3	Bohn Aluminum	2,400	128	125	125	— ½
143⅜	77½	4	Borg-Warner	4,600	85⅝	83⅝	84	— ½
63⅛	30¼	....	Briggs Mfg. Co.	7,500	36⅝	35½	35½	— ⅝
43½	35⅜	2	Briggs & Stratton	800	37⅜	36⅛	37⅜	— ⅛
73⅞	39½	3	Brockway Motor	1,800	43⅜	41⅛	41¼	— 2⅛
54¾	44	1.60	Bullard	300	46½	45½	45½	+ ⅛
47	28¼	....	Chicago Pneu. Tool	1,200	44	43¼	43½	— 1⅛
36	28⅛	3	Chicago Yellow Cab		No sales today			
135	66	3	Chrysler Corp.	36,700	73⅞	71⅛	72⅝	+ ⅜
62⅝	43	2	Commercial Credit	8,400	48⅜	47⅞	48⅛	+ ⅛
105⅜	92½	6.50	do pf.		No sales today			
209½	131½	4	Comm'l Invest. Trust	39,000	212½	204½	208⅜	— 1⅛
99	92	6.50	do pf.		No sales today			
23⅜	13	.80	Continental Motors	3,900	15⅜	14⅝	15	+ ⅜
101½	58⅛	3.50	Cutler-Hammer	300	93⅞	93⅝	93⅞	+ ⅛
222	155⅜	4	Du Pont	37,000	224⅞	216	224⅞	+ 9⅞
76¾	56	3	Eaton Axle & Spring	1,700	60⅜	59½	60¾	+ ⅛
174	126⅜	6	Electric Auto-Lite	1,400	151½	150	150	....
92⅞	77	5	Electric Stor. Battery	600	86⅝	85½	85⅞	— 1½
73⅞	46	2.50	Evans Auto Load	1,100	46½	46	46	— ⅛
22½	5	....	Emerson Brant		No sales today			
22⅜	13⅛	.80	Federal Motors	300	13⅜	13⅜	13⅜	— ⅛
20⅛	6¼	....	Fisk Rubber	7,400	8⅜	8⅜	8⅜	+ ⅛
72½	35⅝	....	do 1st pf.	130	44⅝	43½	43½	— ¼
33⅞	18½	....	Gabriel Snubber	400	19	18¾	19	....
403	219	4	General Electric	9,700	391	386½	390	— 1
25	10½	....	Gardner Motor	700	12⅝	12	12	— ⅛
91¾	66⅛	3	General Motors	334,100	75⅛	71⅞	74⅞	+ 3⅛
126½	122½	7	do 7s pf.	200	123¼	123¼	123¼	— ⅛
64⅛	36⅞	2	Glidden Co.	16,300	61⅝	58	60½	+ 2¾
106⅛	101½	7	do pf.		No sales today			
105⅜	72⅛	4	Goodrich	2,200	73½	72⅝	72⅝	— ⅜
145⅞	111	7	do pf.		No sales today			
154½	103	5	Goodyear T. & R.	9,900	112½	109½	111	— 1⅛
104⅞	99⅜	7	do pf.	900	101½	101	101½	+ 1⅞
54	22⅛	....	Graham-Paige Motor	8,400	24⅞	22⅝	24	+ 1
68¾	28	8	Hayes Body	600	29⅞	29	29⅝	+ ⅛
52½	37½	1.50	Houdaille-Hershey	1,200	44	43½	44	+ ⅛
93½	75⅛	5	Hudson Motor Car	5,700	84⅜	82⅜	83⅜	+ ⅛
82	38½	2	Hupp Motor Car	10,700	42⅞	40⅜	42	+ ⅜
32½	13½	....	Indian Motocycle	1,700	15	13	13⅛	— 1⅜
14¼	8¼	....	Intercon. Rubber		No sales today			
142	92	2.50	Interna. Harvester	5,700	139¼	135¼	136	— 4
145	137	7	do pf.	100	138¼	138¼	138¼	....
242¾	152½	3	Johns-Manville	22,500	206¾	202	203	— 4
16½	5⅝	....	Jordan Motor Car	300	6	6	6	+ ⅛
24	9⅞	....	Kelly-Springfield	1,000	11	10½	10½	— ⅝
100	85	....	do 6s pf.		No sales today			
94⅞	55	....	do 8s pf.	10	56	56	56	....
59¾	40¼	2	Kelsey-Hayes Wheel	1,300	44½	43½	44	+ 1
25	10	....	Lee Rubber & Tire	200	12⅜	12¼	12¼	— ⅜
61	48¾	2.60	Link Belt	200	50⅝	50⅝	50⅝	— 1⅜
114⅜	91	6	Mack Trucks	4,700	99¼	97	98⅝	+ 1⅜
89⅞	69⅛	2	Marlin Rockwell	300	83	83	83	— ½
104	86⅜	4	Marmon	5,000	85⅜	82½	82⅞	+ ⅜
18	7¾	....	Martin Parry	100	8⅛	8⅛	8⅛	....
34⅞	20	....	Mengel	600	26⅛	25½	26	— ⅛
28⅛	11⅜	....	Miller Rubber	100	13⅜	13⅜	13⅜	— ⅛
8	2½	....	Moon Motors	400	3	3	3	— ⅛
31¾	26	....	Moto Meter G & E	6,500	30⅜	29⅛	30⅜	+ ⅛
206	96½	2	Motor Products	1,500	124	119½	123⅛	+ 4⅛
55⅛	39	2	Motor Wheel Corp.	8,600	52⅜	51¼	51⅜	— ⅜
81⅞	35	....	Mullins Mfg.	300	37½	37	37	— 1⅛
100⅞	62	3	Murray Corp.	2,200	67⅞	66½	67	— ⅜
118⅞	81⅛	6	Nash Motors	10,300	87⅝	85½	86	+ 1⅜
6¼	1⅜	....	Norwalk T. & R.		No sales today			
49	19	....	do pf.		No sales today			
10⅞	6¼	....	Omnibus Corp.	900	7½	7½	7½	....
52¼	37	....	Otis Steel	2,800	50¾	49¼	49¼	— ⅜
156½	116⅛	3	Packard Motor Car	4,500	151⅞	148½	150	+ 1¼
22½	11¼	....	Peerless Motor Car	800	12	11⅜	11⅝	— ⅛
37⅞	27½	....	Pierce-Arrow	200	33	32⅜	32⅜	+ ⅜
87½	72½	6	do pf.		No sales today			
31⅜	20	.80	Reo Motors	10,200	20⅝	20¼	20½	+ ⅛
12¼	6	....	Reynolds Spring	13,600	11½	10⅜	11	+ ⅜
66¾	45	....	Spicer Mfg. Co	2,600	61⅛	57¾	57¾	— 3¼
55⅞	45	3	do pf.	500	51	50¼	50¾	+ ⅛
77	64¾	3.50	Stewart-Warner Spd.	2,000	66⅞	66	66⅞	+ ¼
98	73	5	Studebaker Co.	8,100	76⅞	74	76	+ 2
126	123	7	do pf.	20	123	123	123	— 2
31	22⅝	.60	Timken Detroit Axle	17,800	30⅞	29	30½	+ 1⅜
112⅜	73½	3	Timken Roller Bear.	800	109	107⅛	107⅛	— 1⅜
63	38⅜	2.50	Trico	1,400	56⅞	55	55⅛	— 2⅛
65	42	....	U. S. Rubber	5,300	47	45½	45½	— 1½
92½	69½	....	do 1st pf.	500	72½	70¼	70¼	....
42⅞	28½	2	Warner Quinlan	1,600	29⅞	29½	29½	— ½
67¾	43¼	2	Westinghouse A. B.	7,700	64⅜	62⅝	63	— ⅝
53½	38	1	White Motors	2,600	46⅞	45⅝	45⅝	— ¾
61⅛	37	2.50	Wilcox Rich A	300	47	47	47	+ ½
62	34	2	do B	6,700	45¼	44¼	44½	— ⅜
35	20	1.20	Willys-Overland	6,200	22⅞	22¼	22⅞	+ ⅜
103	92	7	do pf.		No sales today			
88	61⅜	4	Yale & Towne	200	87½	87½	87½	....
51¼	34¾	....	Yellow Tr. & C.	40,300	37¼	35¼	36½	+ ⅛
96½	80	....	do pf.		No sales today			